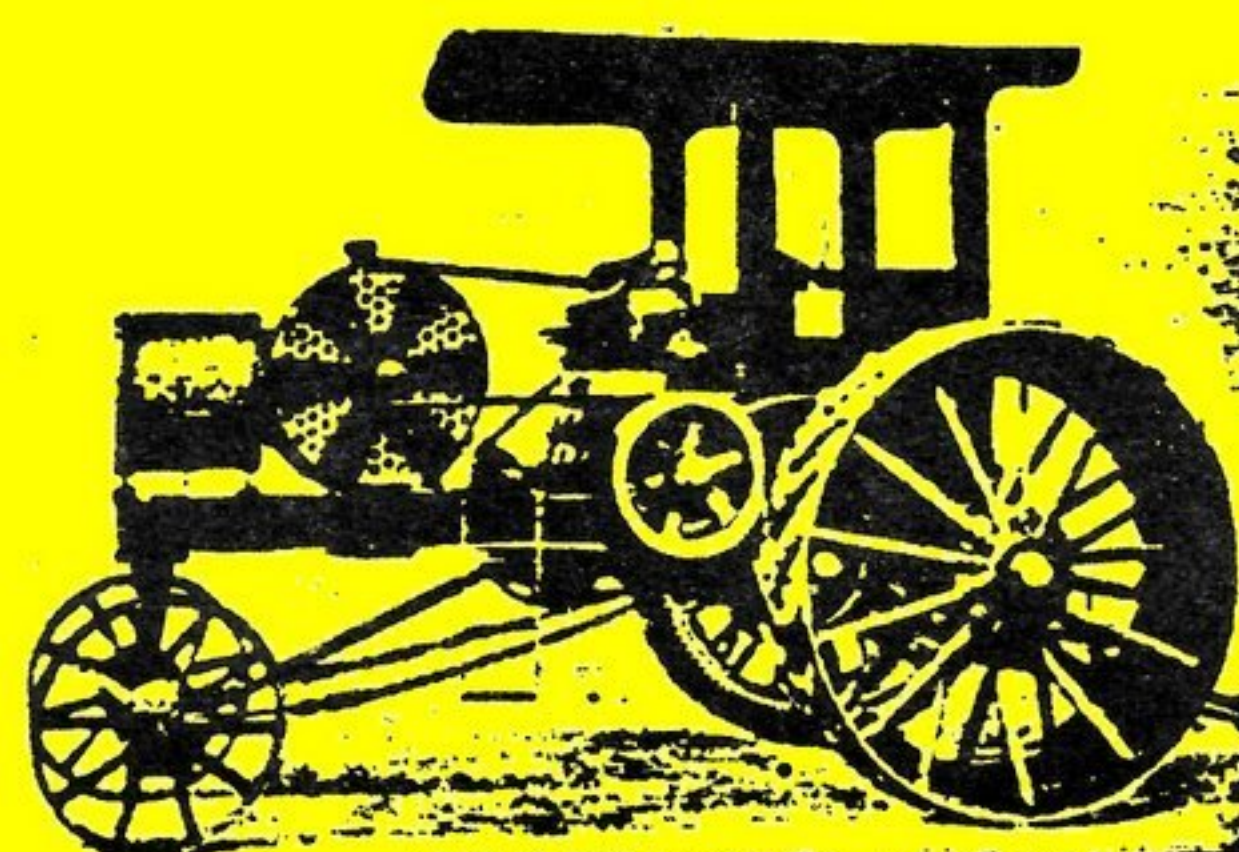
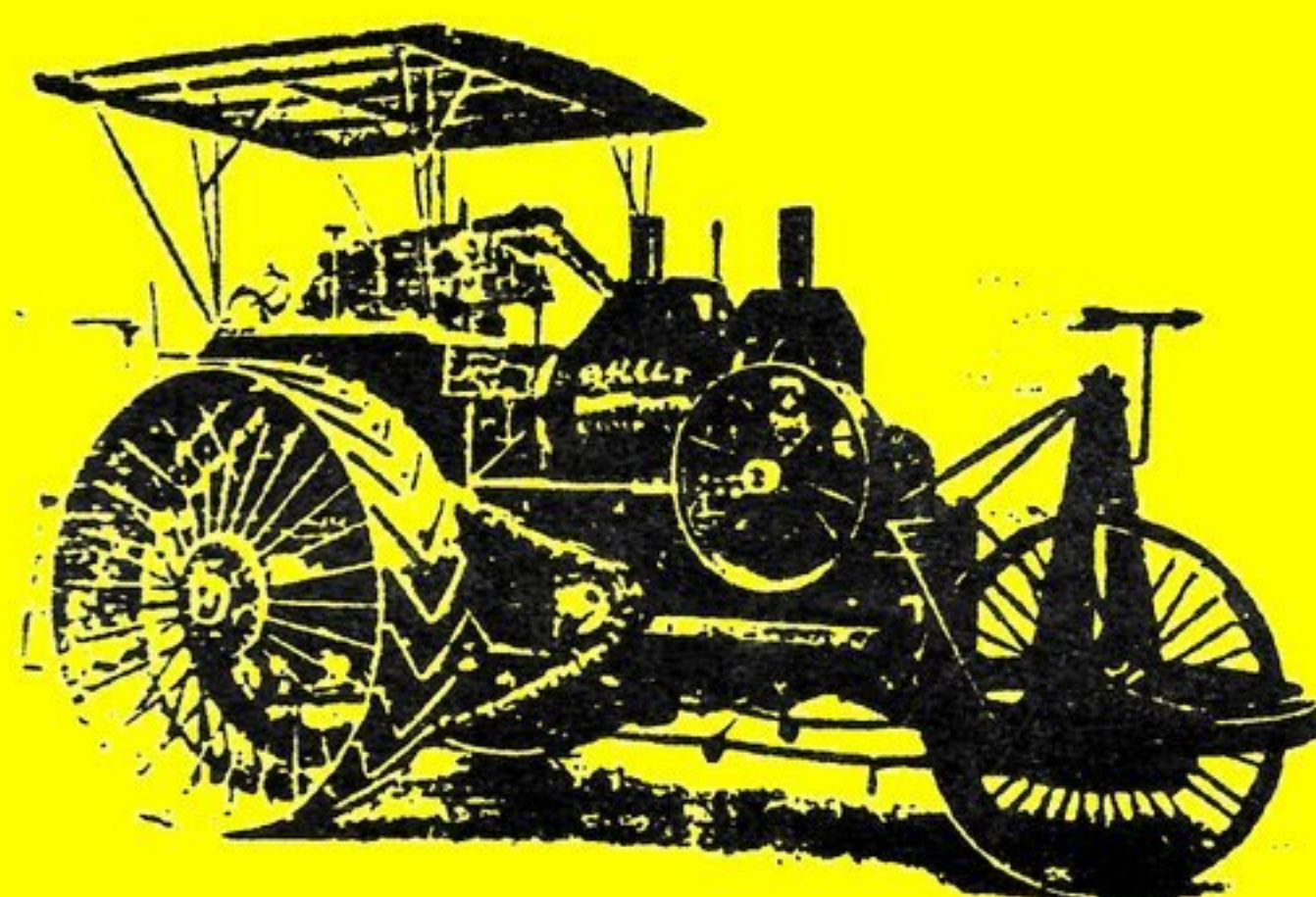
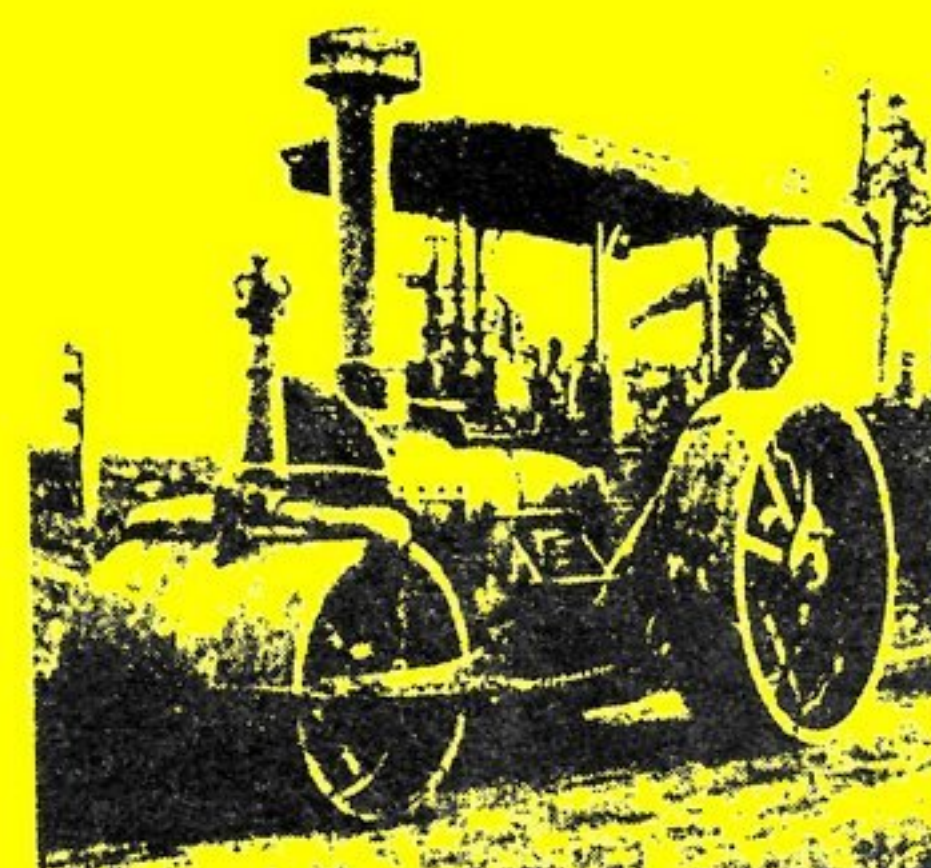
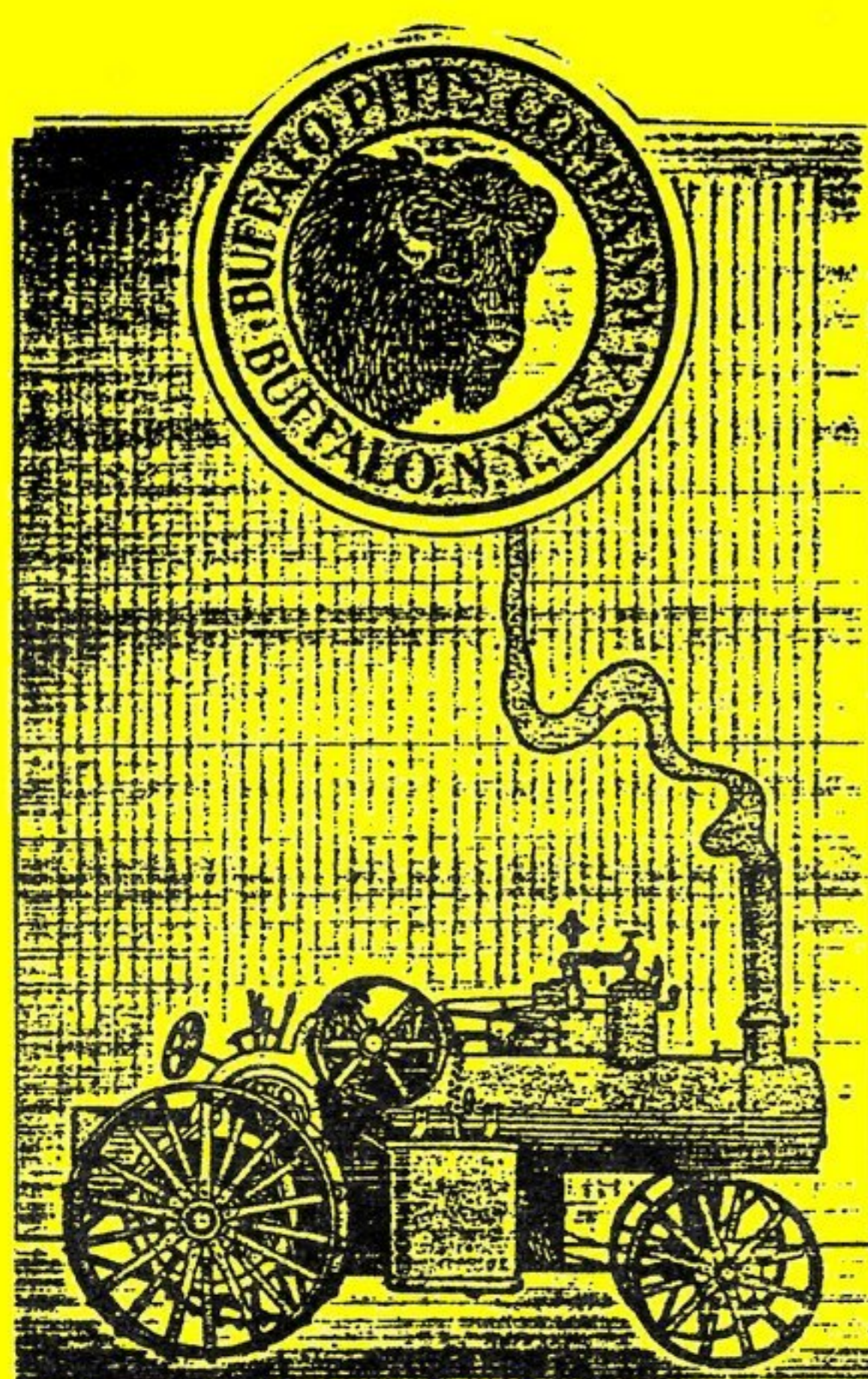
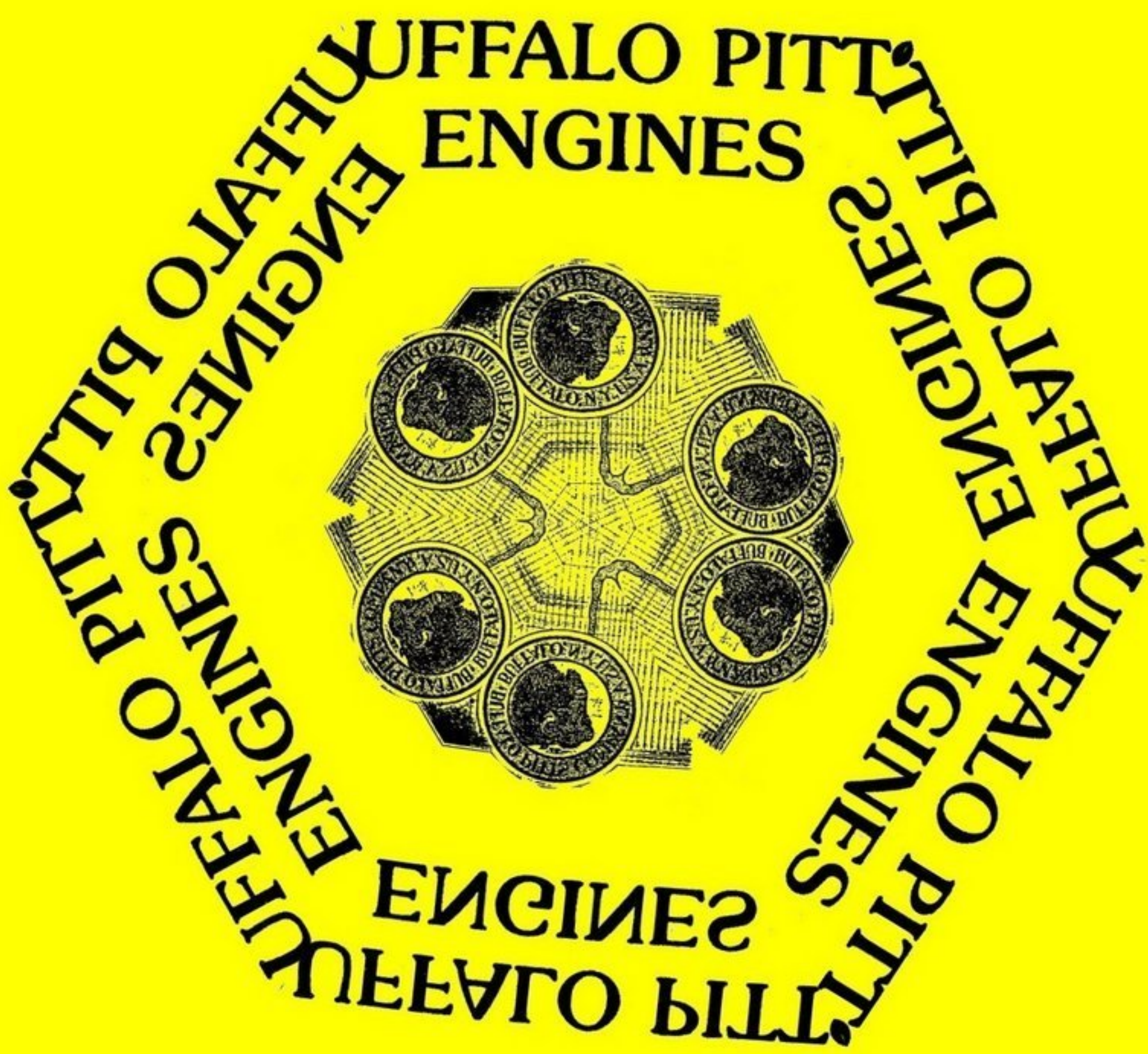
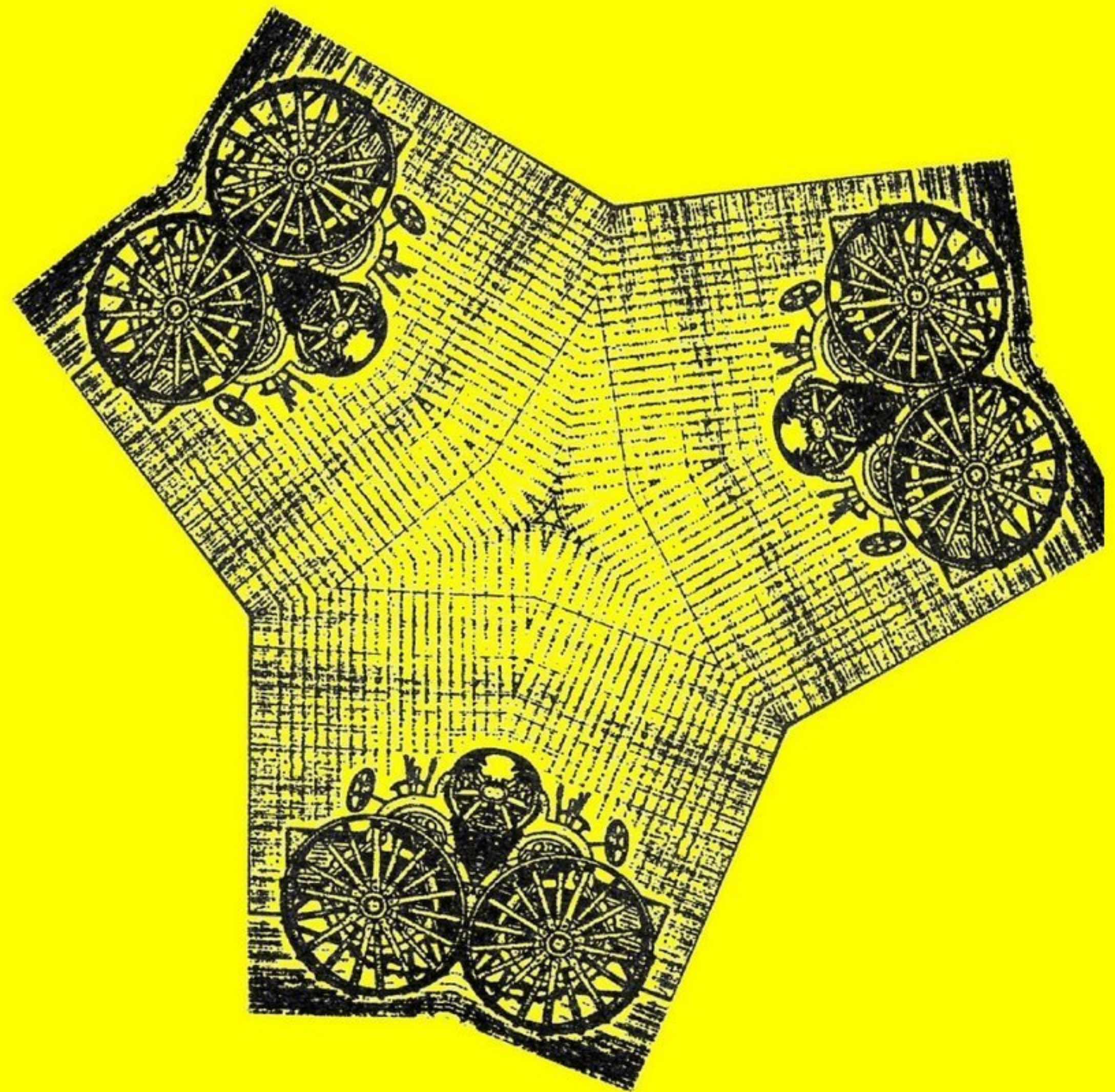
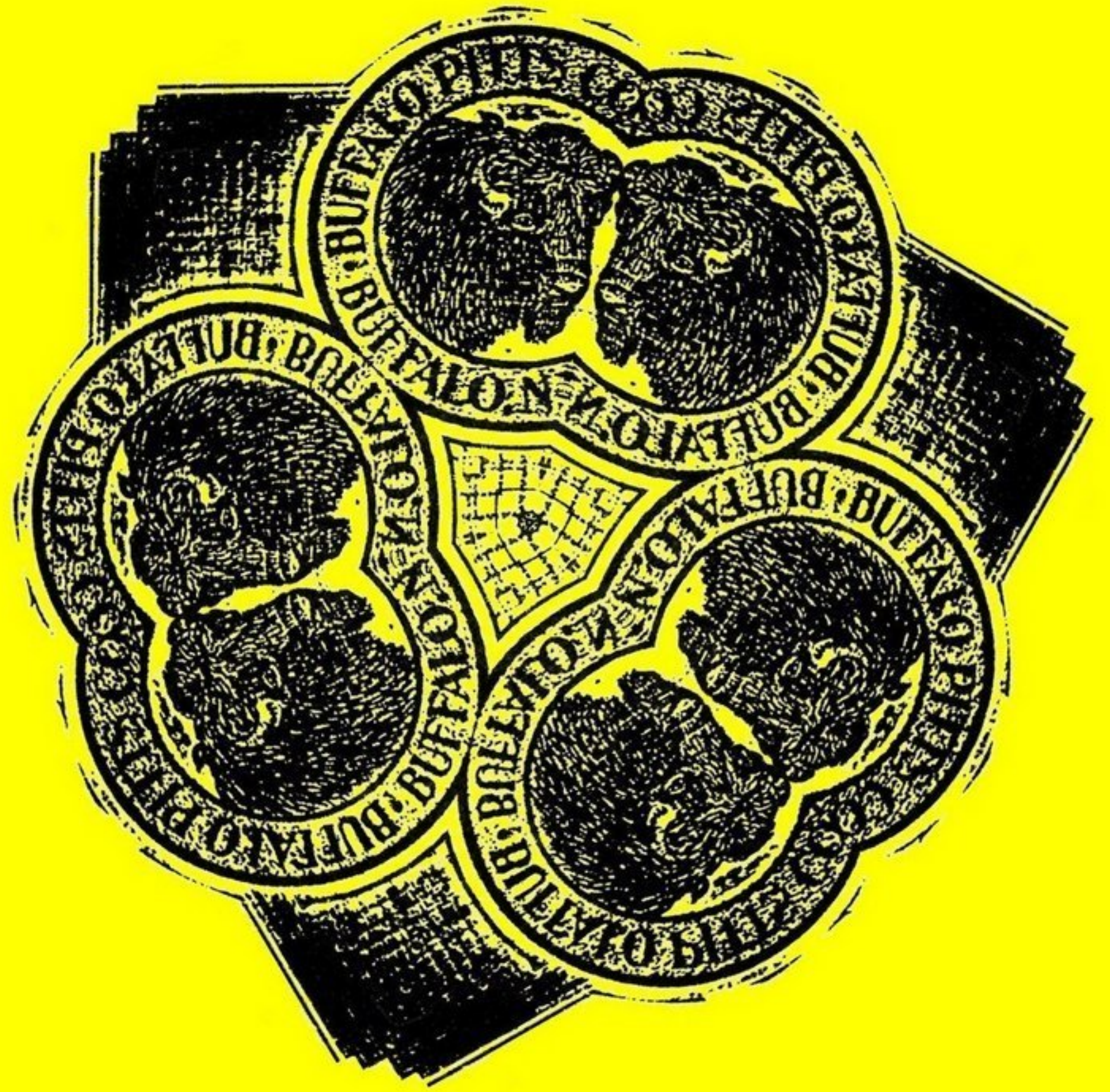
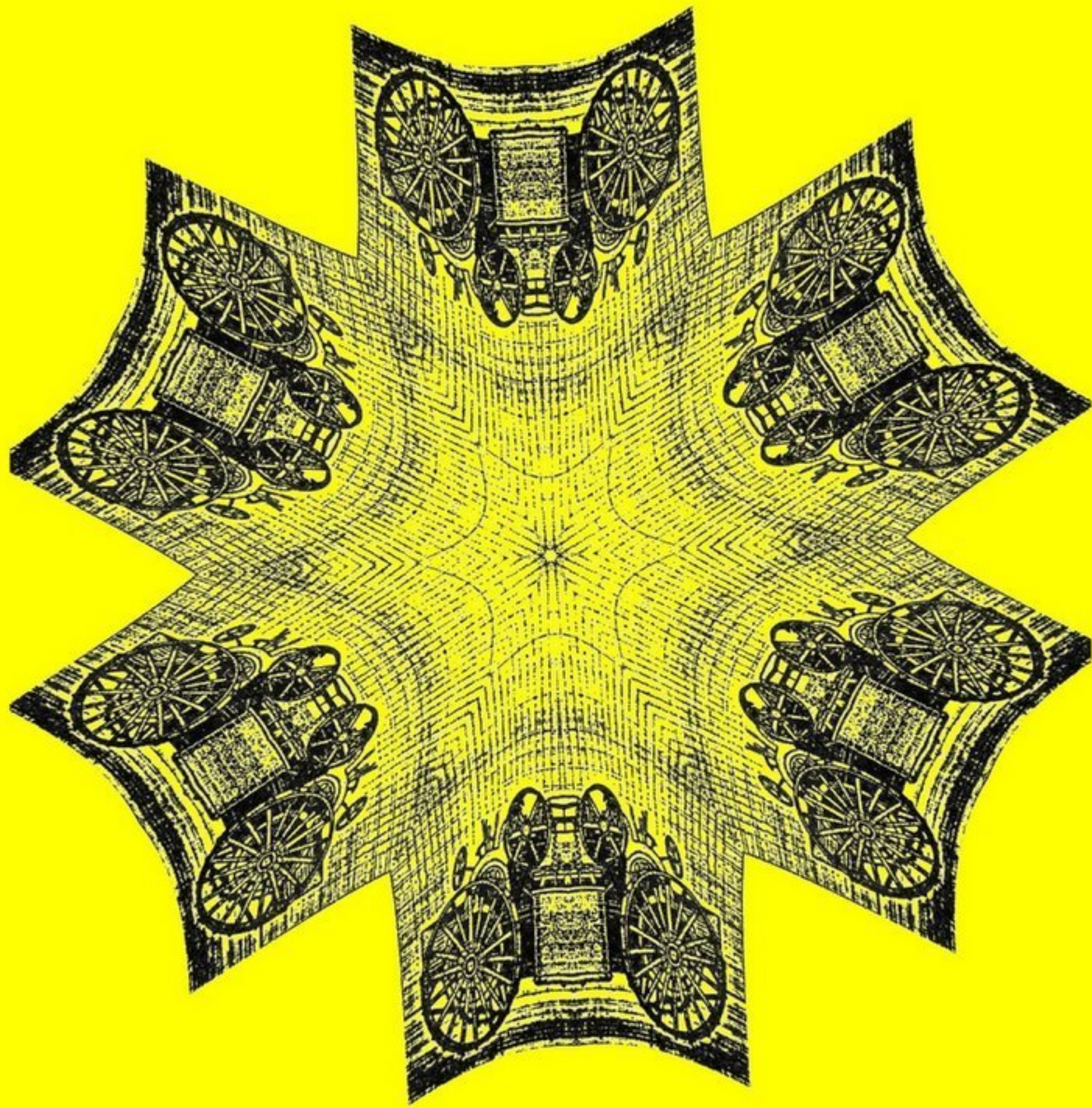


BUFFALO PITTS ENGINES



HERMAN SASS





BUFFALO PITTS COMPANY, BUFFALO, N.Y., U.S.A.



BUFFALO PITTS ENGINES

**BY
HERMAN SASS Ph.D.**

**©1987
PUBLISHED BY
HERMAN SASS
BUFFALO, NEW YORK 14214**

NOTES

Catalogs for all years of manufacture were not available, although some models are carried over for several years.

Specifications and selling prices are included for most models.

Threshers and other agricultural machinery made by Buffalo Pitts are not included, being beyond the scope of this book.

Production figures and serial numbers were not available to the author.

ACKNOWLEDGMENTS

American Society Agricultural Engineers, St. Joseph, MI. R. B. Gray, The Agricultural Tractor, 1855-1950.

Buffalo-Springfield Division of Koehring Co., Springfield, Ohio.

Floyd Clymer, Album of Historical Steam Traction Engines & Threshing Equipment No. 1.

Crestline Publishing Co., Sarasota, Florida, C.H. Wendel, American Farm Tractors, J. C. Norbeck, Encyc. of American Steam Traction Engines.

"Engineers & Engines Magazine," Joliet, Ill.

"Gas Engine Magazine", Lancaster, PA.

W. G. Gomez, Stuart, Florida.

Alan C. King, Radnor, Ohio.

Ontario Agricultural Museum, Milton, Ontario.

Gerald Parker, Fargo, North Dakota.

Reynolds-Alberta Museum, Wetaskiwin, Alberta.

John G. Ruff, Logan, Kansas.

Sunflower Univ. Press, Manhattan, Kansas. R.D. Hurt, American Farm Tools.

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Portable and Steam Traction Engines--pages 3-27.

Road Engines and Road Cars--pages 28-29.

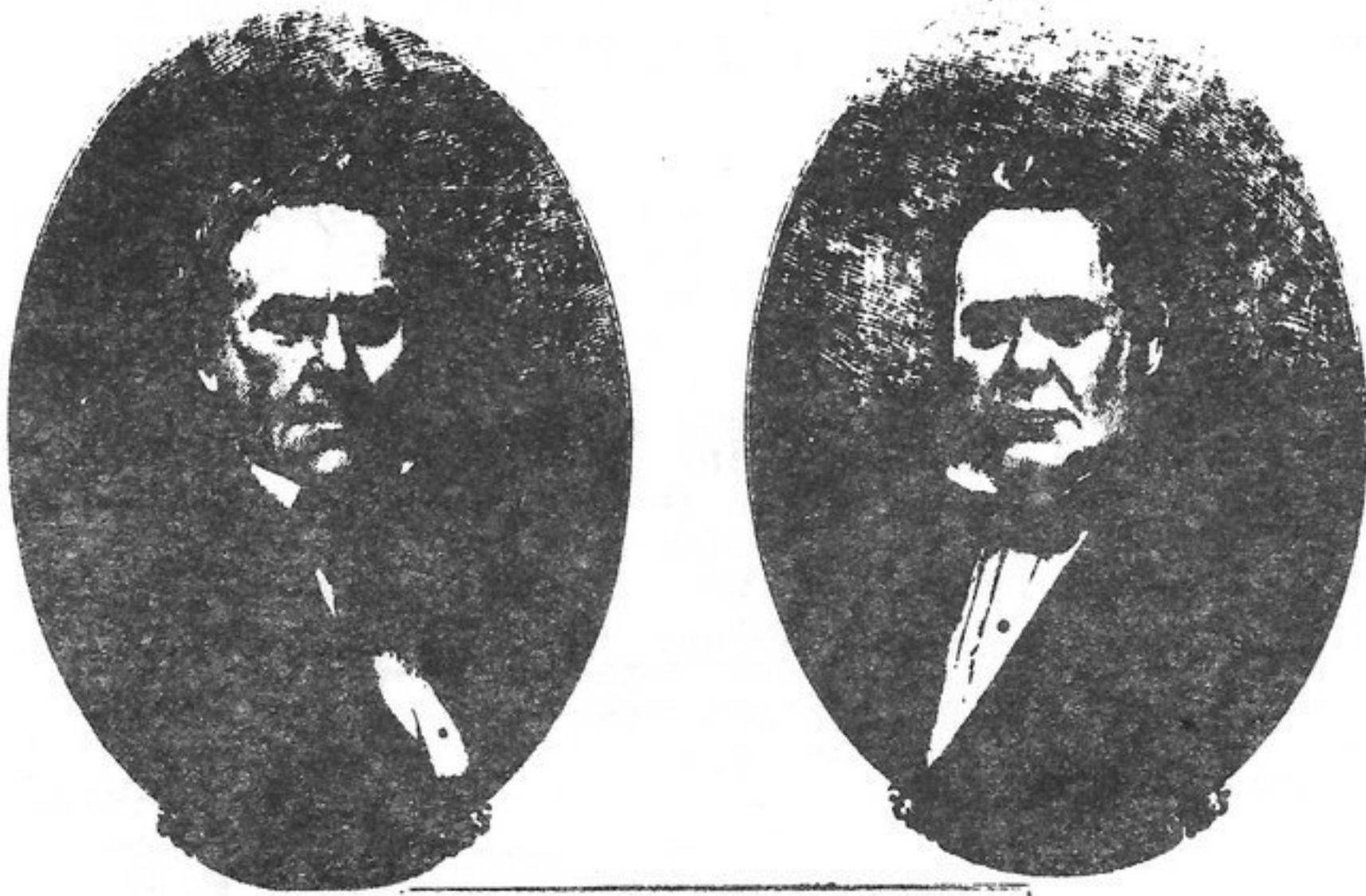
Road Rollers--page 30.

Triplex Gas Tractor & 40-70, 4 cylinder Gas Tractor--page 31-34.

Do-It-All Tractor--page 35.

Truck Bodies--page 36.

Any reader knowing the location of any Buffalo Pitts production figures or serial numbers, please contact the author at 20 East Morris Avenue, Buffalo, New York, 14214.



The Twin Brothers,
H. A. and J. A. PITTS,
founders of the
BUFFALO PITTS COMPANY,
Born December 8, 1799,
at
Winthrop, Maine.

The Buffalo Pitts Company is literally the pioneer in America of threshing machinery, the twin brothers, John A. and Hiram Pitts, having invented and patented in 1837 the first successful threshing and separating machine combined. Earlier they had improved on the old style of thresher; and "in combining the thresher and fanning mill, producing the endless apron, or grain belt separator, they opened a new era in that line of invention.

At first the thresher was produced only in New England. Later it was produced in New York, still later in Ohio and Illinois. John Pitts went to Albany to produce them, then, on to Rochester where he introduced them. Later he went to Springfield, Ohio and back to Buffalo where he died in 1859. John Pitts stopped long enough in each one of these places to get production under way. The product in Buffalo was known as "Buffalo-Pitts."

JOHN PITTS--Buffalo 1851-1859
PITTS & BRAYLEY--1859
BRAYLEY & PITTS--1865
PITTS AGRICULTURAL WORKS--1877 INC.-1897
BUFFALO PITTS--1897-1935

Shipped, In good order, by **PITTS,**
on board the *W. S. Cor. Profulla "Dacotah"*
for Milwaukee. Marked the following
Articles, marked as in the margin, to be delivered as addressed:
Dangers of Navigation; Fire and Collisions excepted.

C. & Co.
Madison
W. S.
P. L. Carman & Co.
W. S.
M. & H. R. R. Co.
from Milwaukee

6 Horse Powers 6 Separator
6 Master Wheels 4 Bdl. Sides
19 Iron Rods 3 Elevators
7 Bdl. Iron Rods 24 Wagon Wheels
6 " Sweeps 6 " Tongues
6 " Aprons 9 Boxes Sundries
4 " Stakes

Take freight to Milwaukee on above
Four Machines 24 10.00
Two Machines Small 7.00
Extra weight 1650 lbs 15 4.47
Total Weight 23000 lbs
12.110
Millions 72.47
52.27

THE BRAYLEY AND PITTS WORKS

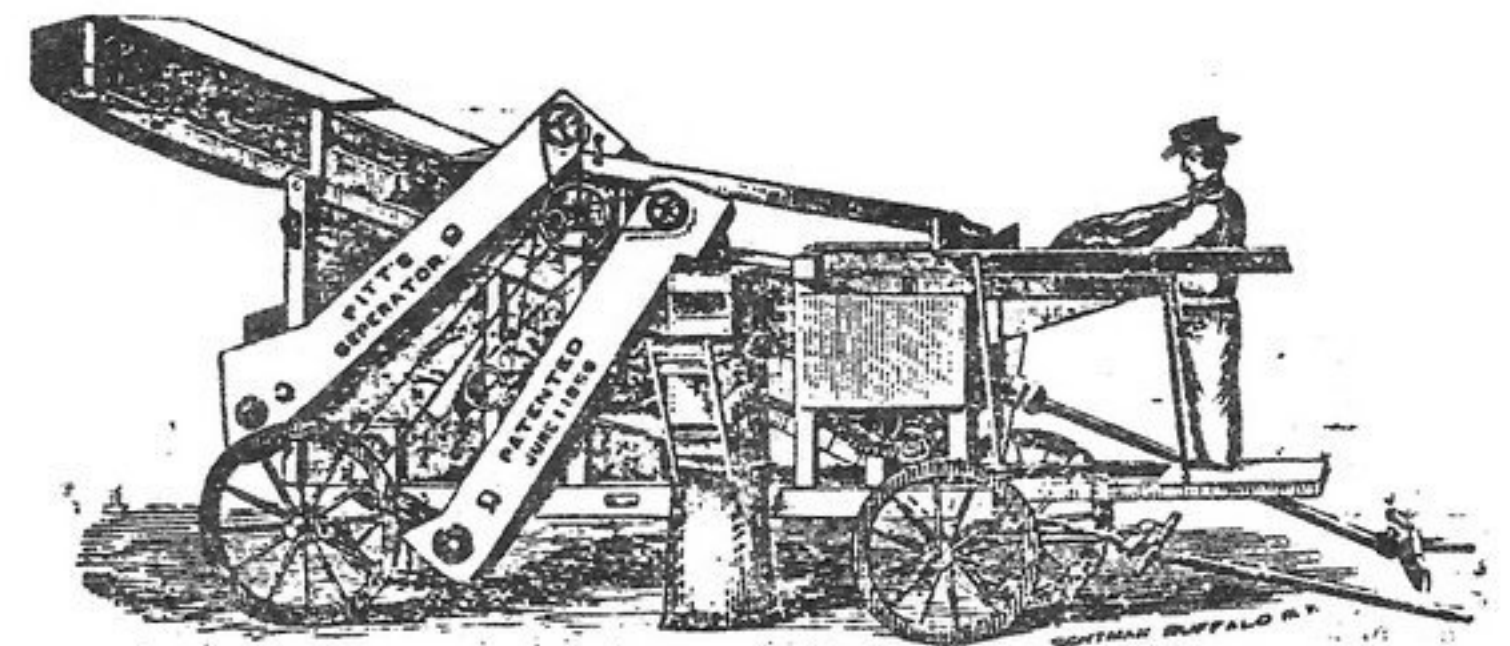
Occupy a part of two squares of ground, bounded on the Erie Canal, Carolina, Fourth and Efner streets. The late Mr. Pitts came here in the year 1851; he had already established small works in Albany and Rochester. At the latter place they are still engaged in the business. He was the first to establish in our city a manufactory of this kind. This establishment is indebted to him for its celebrity mainly for the valuable inventions made by him. This gentleman is accredited with having invented the Treading or Endless Chain Horse Power, which was patented by him in 1836; also for the first Chain Pump and the first Combined Thresher and Separator, patented in 1837, and which is now a leading article manufactured at these works. Important improvements have been made in the construction of this machine since it was first invented, and now, when propelled by six or eight horses, it will thresh and clean from three hundred to five hundred bushels of oats per day and leave the grain deposited in a perfectly neat and clean condition, requiring no handling after it is once fed into the machine until it is ready for the granary. From five to seven hundred of these machines are now made and sold annually. Subsequently Mr. Pitts invented an attachment for measuring and registering the number of bushels threshed, and bagging the grain which runs from the Fanning Mill into the Elevator, then into Reservoir and Measurer, and then into the Bag--each half bushel being accurately registered and counted. The value of such a labor saving machine as this can hardly be computed. In these Works are moulding rooms in which they make their own castings, melting about three tons of iron daily. They have made of threshing machines in the last five years 2,863, and the demand is constantly on the increase. They find their way all along the Pacific coast, in South America, at Australia, and since the close of the rebellion orders are again coming in from Texas and other parts of the Southern country. They employ from one hundred and thirty to one hundred and fifty hands, and use from two to three hundred tons of bar iron annually, which is manufactured at the rolling mills in this city. The pig iron comes from the Salisbury and Hudson River Charcoal Furnaces.

1866

BRAYLEY & PITTS,

PROPRIETORS OF THE

PITTS AGRICULTURAL WORKS



MANUFACTURERS OF

PITTS' PATENT SEPARATOR

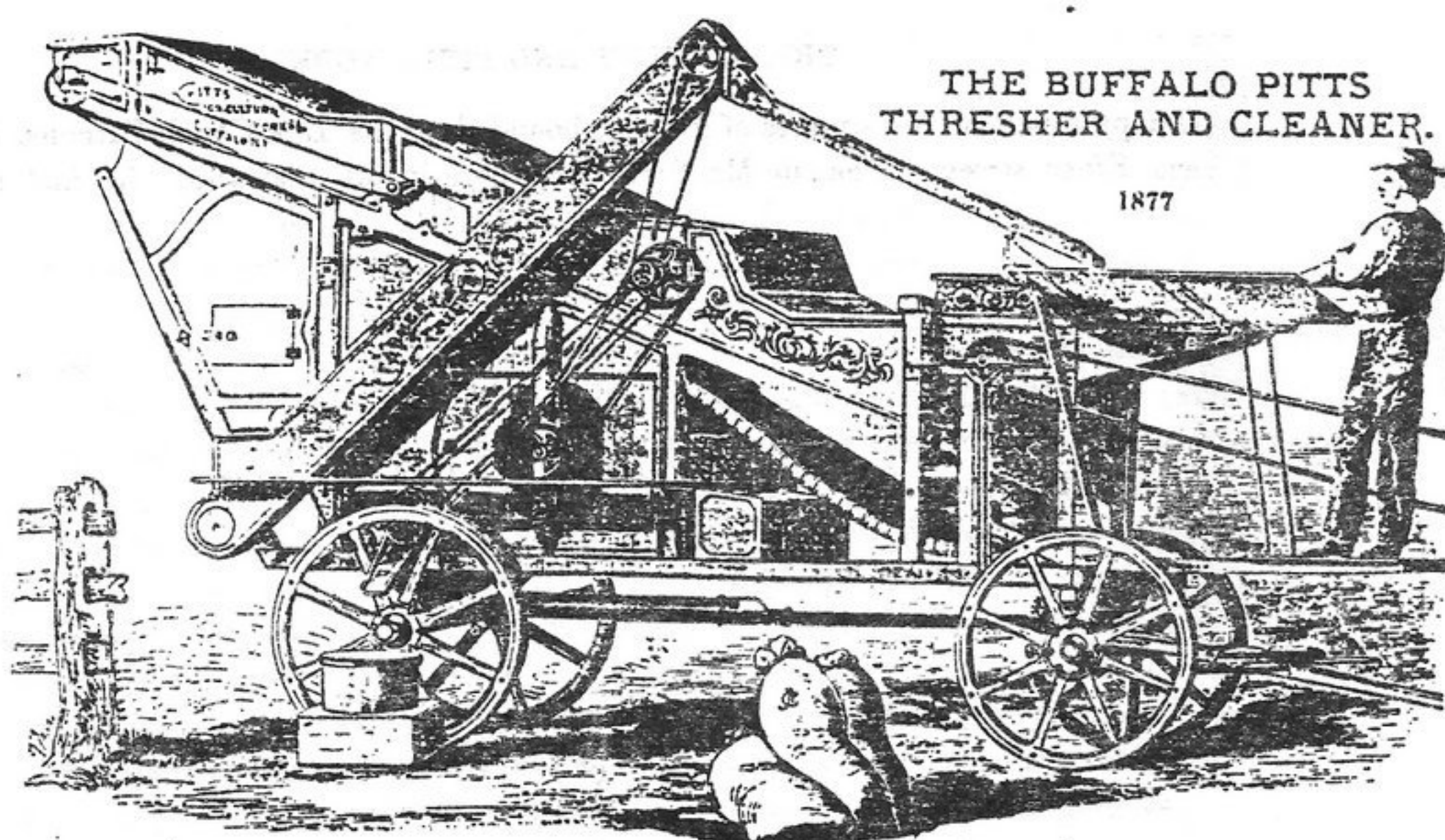
IMPROVED DOUBLE PINION HORSE POWER,

CORN AND COB MILL, &c.

OFFICE AND WORKS,

CORNER CAROLINA AND FOURTH STREETS.

1877

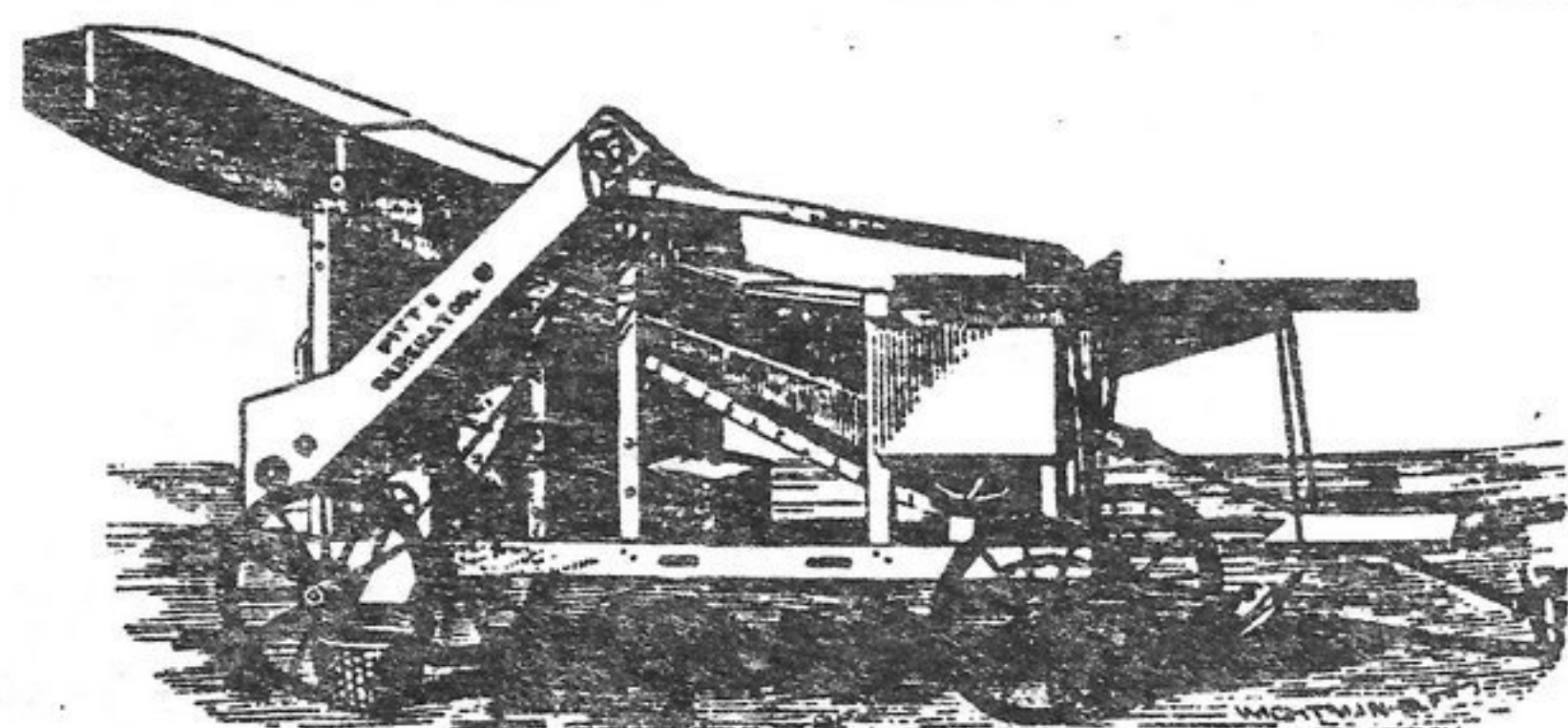


THE PITTS AGRICULTURAL WORKS.

JAMES BRAYLEY, Proprietor.

1877

THE PITTS 1877-1897 AGRICULTURAL WORKS



MANUFACTURES

THRESHING MACHINERY, HORSE POWERS, Etc.

JAMES BRAYLEY, Proprietor.

Corner of Carolina and Fourth Streets.

Buffalo Pitts Company—1851.

Among the manufacturing firms of Buffalo, none is more prominent or influential than the Buffalo Pitts Company. Messrs. Hiram A. and John A. Pitts, the first American inventors who were thoroughly successful and practical in the manufacture of threshing machines, were the founders. H. A. Pitts, in 1830, patented an improvement on the railway or tread power, which consisted in the substitution of hard maple rollers under the movable platform, connected by an endless chain for the old-fashioned leather belt. While operating these machines in the State of Maine and other New England States, H. A. Pitts conceived the idea of combining the old "Ground Hog" and the common fanning mill in a portable form. In December, 1837, a patent was granted for their thresher, which was the original of the great family of endless apron or grain belt separators.

Mr. John A. Pitts began the manufacture of his famous machines in Rochester, N. Y., and later moved to Springfield, O., and came to Buffalo in 1851. The Rochester and Springfield plants were continued until 1878, when they were consolidated at Buffalo. Mr. John A. Pitts, the inventor and founder, died July 1, 1859, and his son, John B. Pitts, and his son-in-law, James Brayley, succeeded to the business under the firm name of Pitts & Brayley. Mr. Brayley succeeded to the business in 1865, and the present company was incorporated in 1877 with \$300,000 capital. In 1897 the name of the company was changed from the Pitts Agricultural Works to Buffalo Pitts Company. The officers of the company were Carlton Sprague, president and treasurer; C. M. Greiner, secretary; J. B. Olmsted, attorney; F. R. Keating, manager implement department; David Farquhar, superintendent; and R. C. Adams, assistant superintendent. The works cover more than five acres of floor space, equipped with all the latest devices and appliances, having wood working, machine and assembling shops, blacksmithing, painting and finishing departments, to which has recently been added a complete and modern foundry, with direct connection with the New York Central Belt Line at Genesee Street.

The Buffalo Pitts Company constructs the famous Buffalo Pitts Threshing Machinery, consisting of all styles of coal burning and straw burning traction and portable engines, grain threshing machines and bean machines. It also manufactures the Buffalo Pitts Double Engine Steam Road Roller, and a complete line of spring tooth and spike tooth harrows, disc harrows, cultivators, hay rakes, and land rollers. In engine building this firm has been remarkably successful, and its engines are noted for their great strength, efficiency, simplicity, durability, and ease of handling, and are fitted with all the latest and most practical attachments.

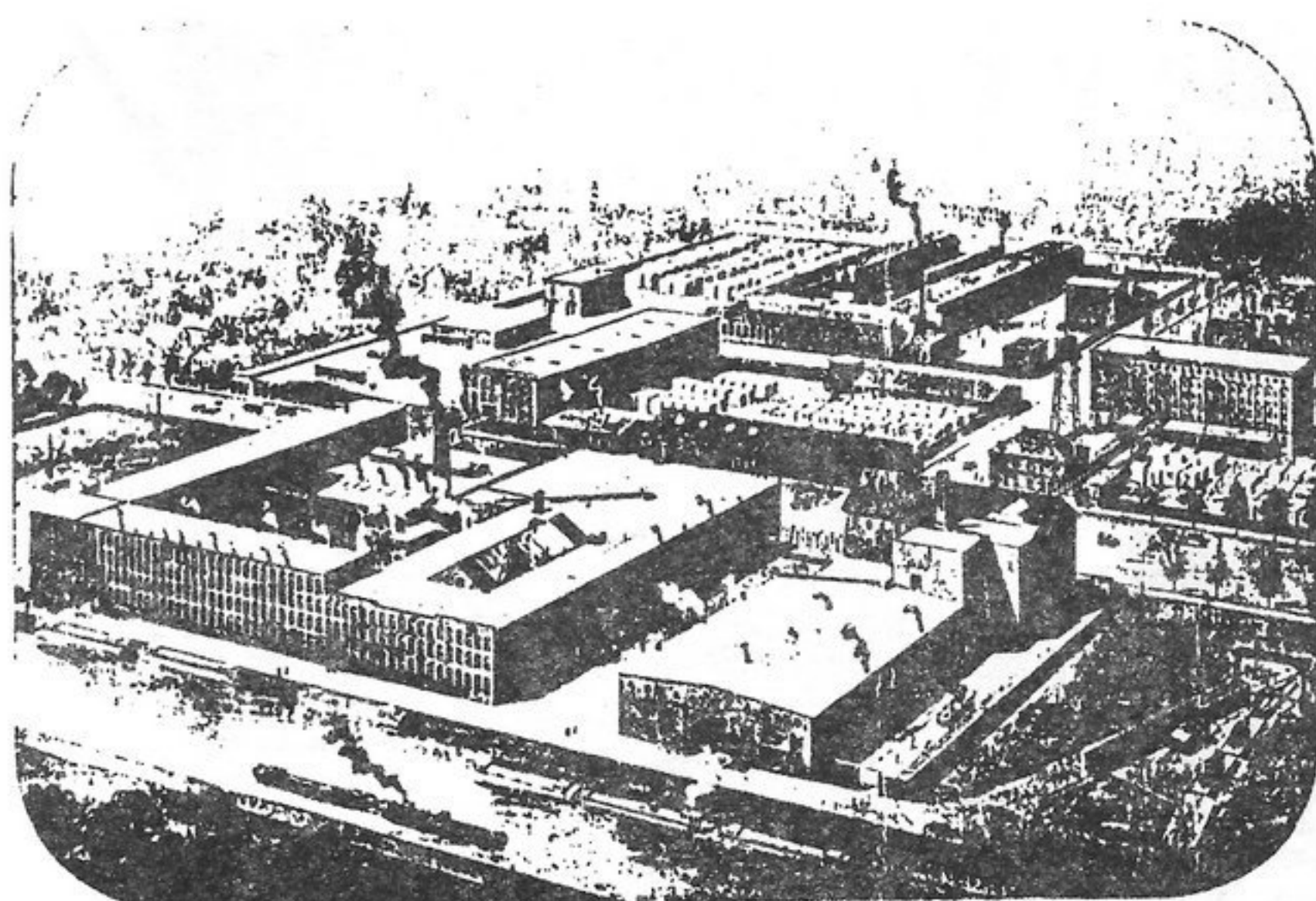
The Niagara Thresher has kept its proud position as the leading thresher in those districts where a large amount of work must be done in a day, and where a strong, long-lived, well made machine is appreciated.

The Buffalo Pitts Double Engine Steam Road Roller has been purchased and used by the United States Government, by city and county authorities, and by a very large number of contractors and private owners. These rollers are suited to light and heavy work, and are built in a workmanlike manner to withstand the hard and constant use to which machines of this kind are subjected. Their superiority over all other machines, lies in the fact that

they use double engines, similar to the practice in locomotive building.

In the manufacture and distribution of its varied products, the reputation of this firm for excellence and marked superiority, has not only been thoroughly maintained, but everywhere increased and extended. The Buffalo Pitts Company is a large exporter of threshing machines and farm implements, and has agencies established in the principal cities of South America and Australia.

The office is located at the corner of Carolina and Fourth streets, while the works cover the ground between Carolina, Fourth and Efner streets and the Erie Canal. Branch offices are located in Fargo, N. D., Minneapolis, Minn.; Portland, Oregon; Spokane, Wash.; Madison, Wis.; Detroit, Mich.; Boston, Mass., and New York City; and general agencies in San Francisco, Sacramento, Los Angeles, Cal.; Dallas, Tex.; Omaha, Neb., and Peoria, Ill.



FACTORY OF THE BUFFALO PITTS COMPANY.
OPERATED BY NIAGARA FALLS ELECTRIC POWER.

MA
BUFFALO
PITTS
(1907)

Buffalo Pitts

engines will be found in every country where grain grows or highways run. From the small farm lands of the East to the Pacific Coast, in South America, Australia, the Philippine Islands, Russia, Austria, and Germany the products of the Buffalo Pitts Company are known for their excellent construction and durability.

The plant of the company is not only the largest, but is the only one of its kind operated by electric power from the great falls of Niagara. It is equipped with the latest and most complete system of electric and pneumatic machinery. A large force of first-class mechanics is regularly

employed, and the shops are run throughout the entire year.

The products of the Buffalo Pitts Company consist of large machinery, and include traction and portable engines that burn wood, coal, straw, or oil for fuel; machinery for threshing, separating, and cleaning all kinds of grain, flax, rice, beans, and so forth; special steam traction engines for plowing, hauling, and grading; road locomotives and road freight cars for hauling ore, timber, logs, or coke; and special cars for carrying and spreading crushed stone. These products are shipped to all parts of the globe.

The officers of the company are C. M. Greiner, president and treasurer; William G. Gomez, vice-president; John M. Olmsted, secretary.

1908

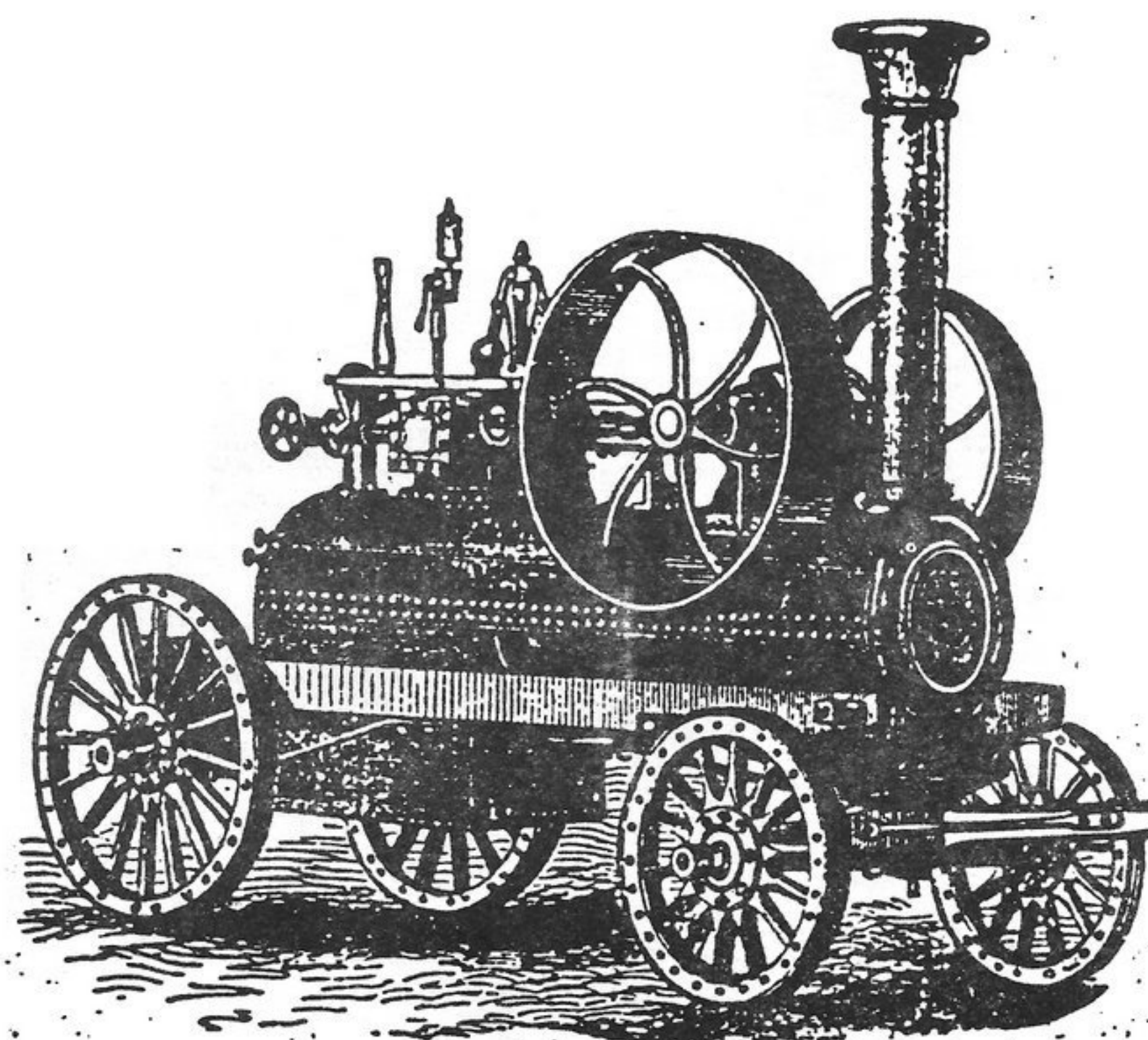
The present officers of the Buffalo Pitts Company are: William G. Gomez, president and treasurer; William J. Stevens, secretary.

The expansion of the firm has been notable. It is claimed that it is without doubt one of the largest and most successful manufacturers of steam traction engines and threshing machinery in the world, attracting a trade unequalled by any similar industry in the history of our commerce. Obviously, the plant of the Buffalo Pitts Company is one of considerable magnitude, and its product finds a market in every continent. Besides threshing machinery and the ordinary traction engines, the company has manufactured many unique means of transportation, including road locomotives, road freight cars, and special cars for carrying and spreading crushed stone. It also enters into the manufacture of portable engines. The power used to operate the plant comes from Niagara.

1923

In order to achieve portability many of the early farm engines were built on skids which permitted the machine to be dragged from one location to another. Some of them were loaded into wagons for transportation. The Pitts Company of Buffalo, New York, in writing to one of their agents in Madison, Wisconsin, in 1860, stated that the engines described "are portable on small rollers; not on large wheels for transporting around the country, but they are easily run up on to a wagon and taken from place to place if necessary." Ordinarily, a set of wheels similar to those on wagon trucks was attached to the frame of the engines, thus converting a stationary engine into a mobile unit.

Wik



Portable Engine sold by the Pitts Company, Buffalo
N. Y. (Annual Catalogue, Pitts Agricultural Works, 1861)

Wik

By 1870, the building of steam engines was an important aspect of the threshing machine manufacturer's business. During that decade, farmers in all sections of the nation began applying steam power to their wheat, corn and rice threshing and cotton ginning operations

Although self-propelled steam engines did not reach the market before the 1870's, it was not because inventors failed to devote their attention to the development of traction models.

But, the first traction steam engine produced in the United States was not marketed until 1873, when the Battle Creek, Michigan, firm of Merritt and Kellogg offered a self-propelled model for sale. By the late 1870s, the C. and G. Cooper Company of Mount Vernon, Ohio, had won the reputation of being the first company to manufacture traction steam engines in quantity and market them nationwide. In 1880, more than 1,000 Cooper steam tractors were in use across the country. Other agricultural manufacturing firms quickly sought to win the farmer's business, and, by 1881, most of the threshing machine manufacturers were making steam traction engines. By the late 1880s, the gearing, clutching, braking, and steering problems had been eliminated so that the driver could operate the tractor without losing control.

Hurt

Little is known of Buffalo Pitts activity with portable steam engines in the 1860s, or their activity with steam traction engines in the 1870s (see above).

Catalogs and information were not available to the compiler.

The first information found was regarding 1884 steam traction engines.

3

THE PITTS AGRICULTURAL WORKS, BUFFALO, N. Y.

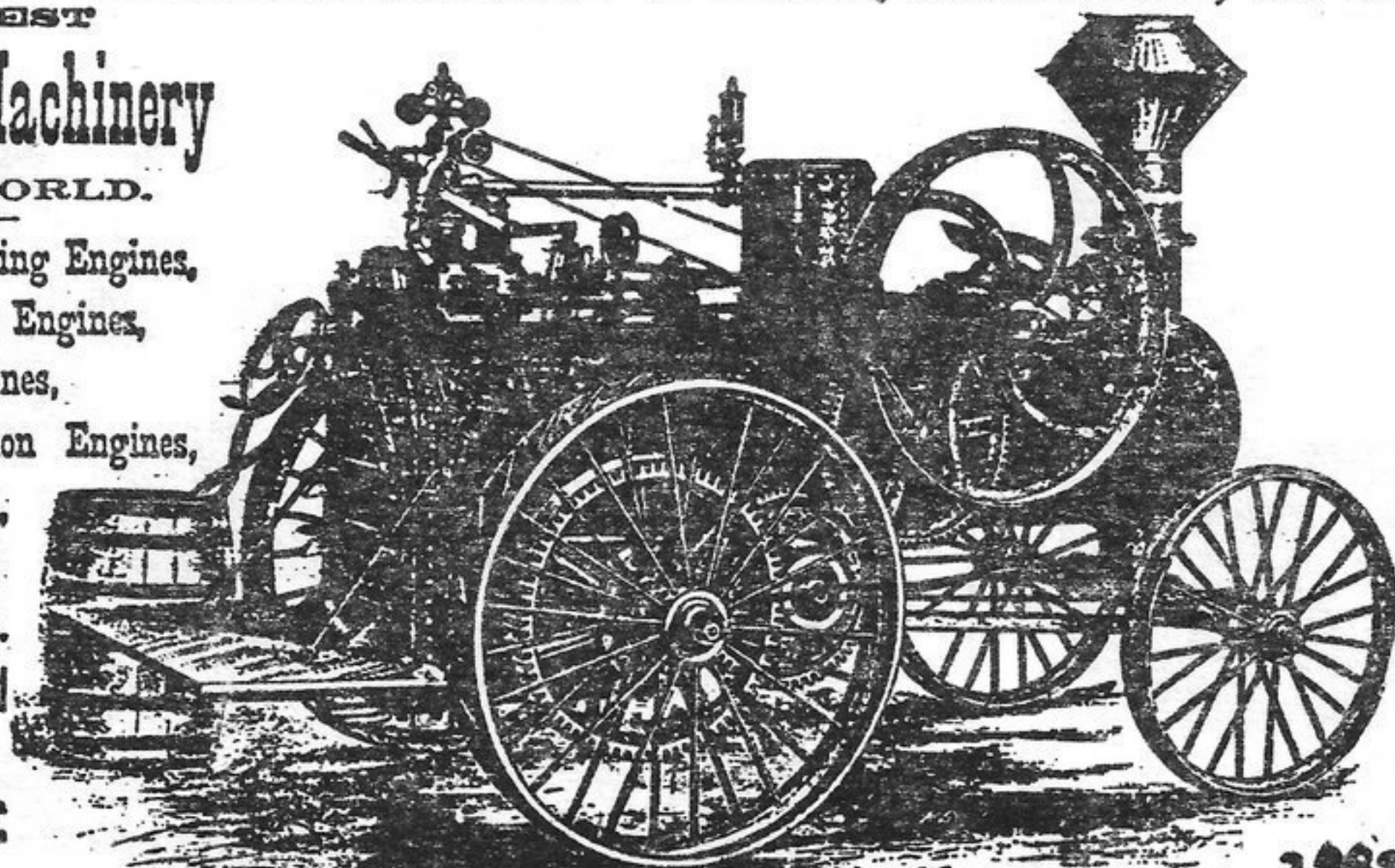
THE BEST Threshing Machinery IN THE WORLD.

Coal or Wood Burning Engines,
Straw Burning Engines,
Plain Engines,

Traction Engines,
Vibrating Treshers,
Apron Threshers,
Horse Powers, &c.

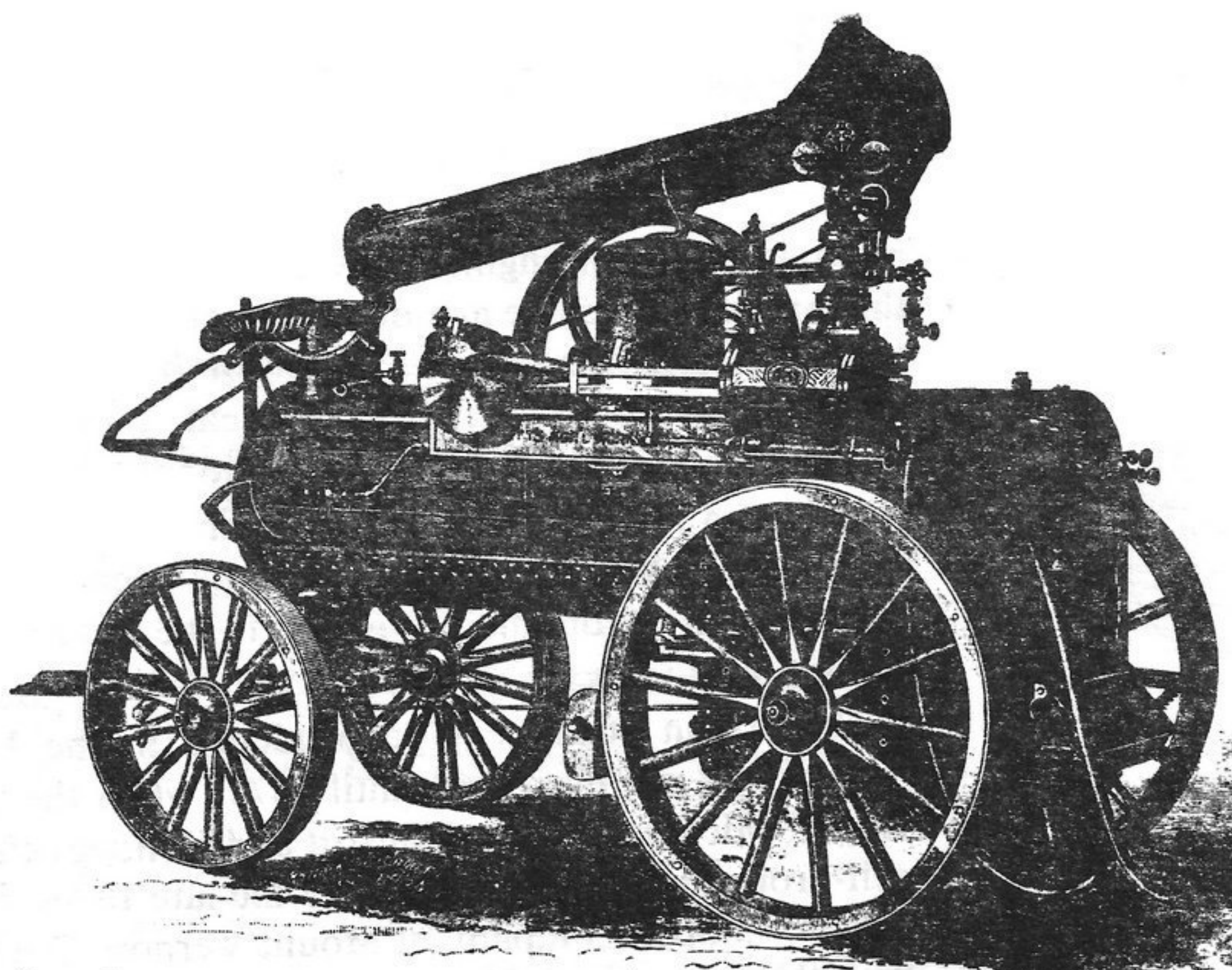
Strength, Utility, and
Durability.

This Cut Represents a
Traction Engine that Speaks
for Itself.



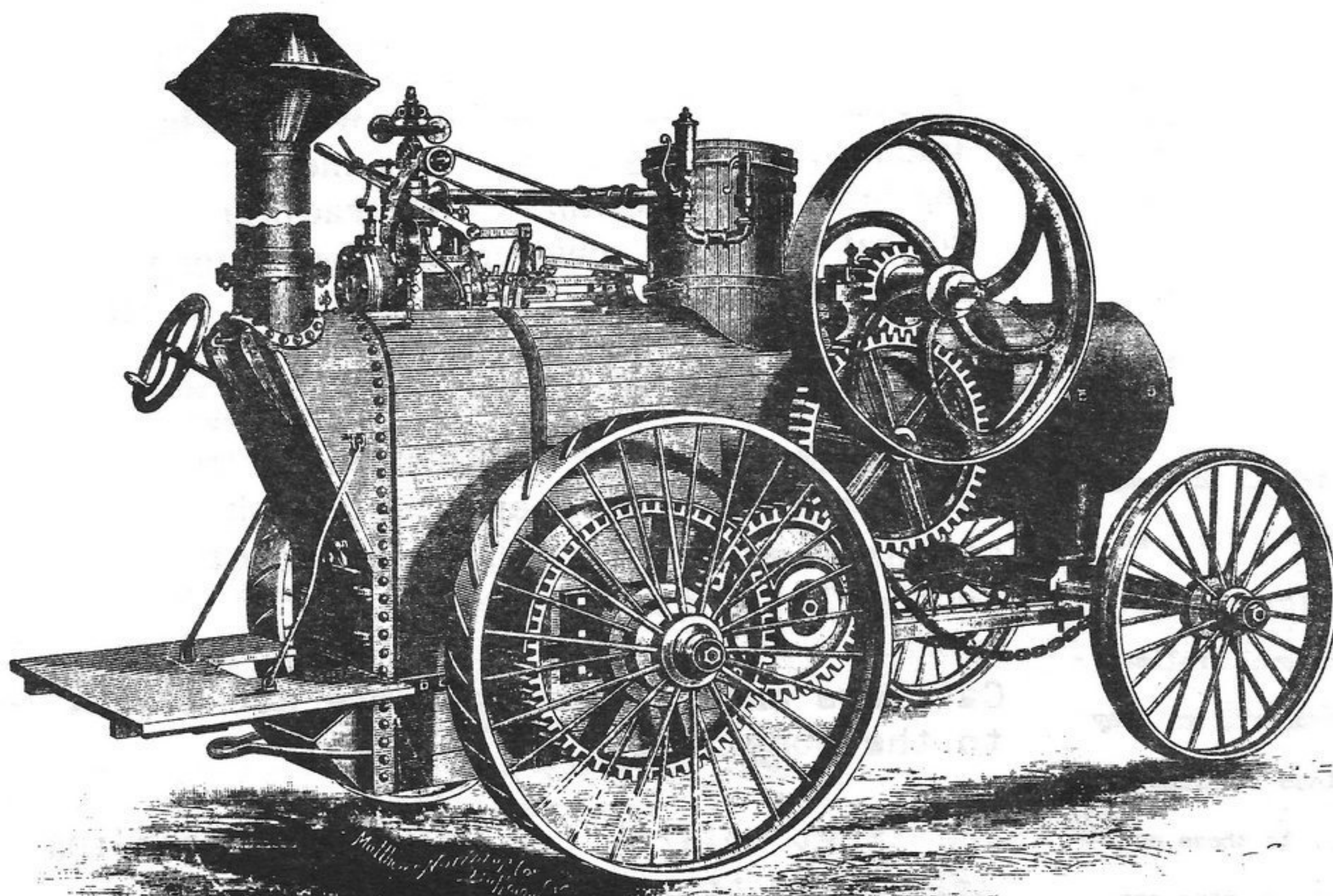
SEND FOR CATALOGUES AND PRICE LISTS.

1882



1884 BUFFALO PITTS COAL- OR WOOD-BURNING PLAIN ENGINE.

SIZES 6, 8, 10, 13 AND 17 HORSE-POWER.



BUFFALO PITTS STRAW-BURNING TRACTION ENGINE.

SIZE, 13 HORSE-POWER.

1884

TABLE OF THE DIMENSIONS OF BUFFALO PITTS COAL- OR WOOD-BURNING ENGINES.

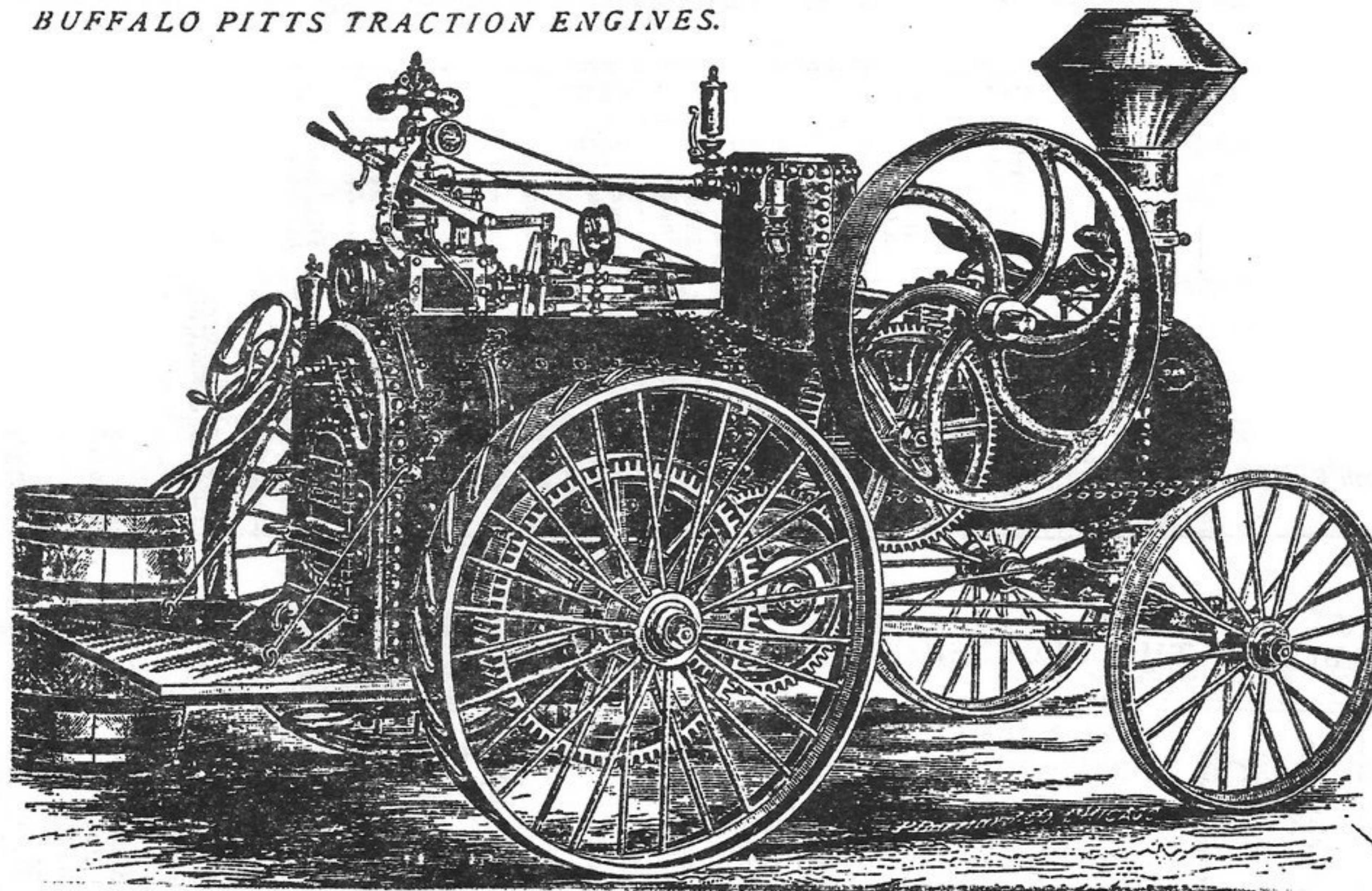
	Number of Engine.	Horse-Power.	CYLINDER.			BOILER.					FLY-WHEEL		Revolutions per Minute.	TRACTION WHEELS.				
			Diameter in inches.	Length of Stroke in inches.	Height in inches.	FIRE-BOX.			Diameter in inches.	Number.	FLUES.			Diameter in inches.	Width of Face in inches.	Diameter in inches.	Width of Face in inches.	Weight Complete in pounds.
						Length in inches.	Width in inches.	Shell			Diameter in inches.	Length in inches.						
PLAIN (mounted on Wooden Wheels),	6	6	5½	9	32	30	19½	24	26	2	66	36	6½	225			4,340	
	8	8	6½	9	32	32	21	25	30	2	66	36	6½	225			4,460	
	10	10	7¾	10	33	36	23	27	36	2	66	44	8½	190			5,570	
	13	13	8¾	10	34½	40	25	29	43	2	66	44	8½	190			6,980	
	17	17	8¾	12	38	44	29	33	54	2	76	48	10½	175				
TRACTION (Iron Wheels),	10	10	7¾	10	33	36	23	27	36	2	66	44	8½	190	55	8	8,360	
	13	13	8¾	10	34½	40	25	29	43	2	66	44	8½	190	55	12	9,000	
Mounted on SKIDS,	6	6	5½	9	32	30	19½	23½	26	2	66	36	6½	225				
	8	8	6½	9	32	32	21	25	30	2	66	36	6½	225				
	10	10	7¾	10	33	36	23	27	36	2	66	44	8½	190				
	13	13	8¾	10	34½	40	25	29	43	2	66	44	8½	190				
	17	17	8¾	12	38	44	29	33	54	2	76	48	10½	175				

1884

TABLE OF THE DIMENSIONS OF BUFFALO PITTS STRAW-BURNING ENGINES.

	No. of Engine.	Horse-Power.	CYLINDER.		BOILER.							FLY-WHEEL.		Revolutions per Minute.	TRACTION WHEELS.		
			Diameter in inches.	Length of Stroke in inches.	FIRE-BOX.			SHELL	FLUES.			Diameter in inches.	Width of Face in inches.		Diameter in inches.	Width of Face in inches.	Weight Complete in pounds.
					Height in inches.	Length in inches.	Width in inches.		Diameter in inches.	Number	Diameter in inches.						
Plain (mounted on Wooden Wheels or Skids).	S. B. 13	13	8½	10	34½	40	25	29	43	3	66	44	8½	190		6,970	
Traction.	S. B. 13	13	8½	10	34½	40	25	29	43	3	66	44	8½	190	55	9,600	

1884



• Coal • or • Wood-Burner • Traction • Engine •

RIGHT-HAND VIEW, SHOWING GEARING AND PLAIN PLATFORM.

- Sizes— 6 Horse-Power with 8-inch face Traction Wheels.
 8 Horse-Power with 8-inch face Traction Wheels.
 10 Horse-Power with 10-inch face Traction Wheels.
 13 Horse-Power with 12-inch face Traction Wheels.
 *18 to 20 Horse-Power with 16-inch face Traction Wheels.

1886

EXTRA LIST

DAKOTA AND MINNESOTA PRICES

— FOR —

Extra Large California Style Apron Thresher and California Style
 Straw-Burning Plain and Traction Complete Rigs.

THESE THRESHERS HAVE DOUBLE ENLARGED GRAIN AND
 STRAW BELTS, OUR NEW DOUBLE STRAW BELT,
 EXTRA WIDE PULLEYS AND BELTS, AND
 4-IN. TIRE ON WHEELS, ETC., ETC.

THRESHERS.

- No. 10—36-inch Cylinder, 52-inch Grain Belt, California Style, \$500
 " 12—40 " " 56 " " 540

STRAW-BURNING PLAIN ENGINES.

IRON WHEELS.

BOILERS JACKETED.

- No. S. B. 14—Fourteen Horse (8½x10 Cyl.) Engine, Boiler 31-inch
 Waist, \$1,300
 No. S. B. 18—Eighteen to Twenty Horse (9x10 Cyl.) Engine, Boiler
 33-inch Waist, Special California Style, Centre
 Crank, Two Fly Wheels, High Speed, etc., 1,600

STRAW-BURNING TRACTION ENGINES.

IRON WHEELS.

BOILERS JACKETED.

- No. S. B. 14—Fourteen Horse (8½x10 Cyl.) Engine, Boiler 31-inch
 Waist, \$1,500
 No. S. B. 18—Eighteen to Twenty Horse (9x10 Cyl.) Engine, Boiler
 33-inch Waist, Special California Style, Centre
 Crank, Two Fly Wheels, High Speed, etc., 1,900

COMPLETE STRAW-BURNING PLAIN ENGINE.

CALIFORNIA THRESHING RIGS.

- No. 63 Rig—36-inch Cylinder, 52-inch Grain Belt Apron Thresher
 and 14 Horse Plain Engine, \$1,800
 No. 65 Rig—40-inch Cylinder, 56-inch Grain Belt Apron Thresher
 and 14 Horse Plain Engine, 1,840
 No. 67 Rig—40-inch Cylinder, 56-inch Grain Belt Apron Thresher
 and 18 to 20 Horse Plain Engine, 2,140

COMPLETE STRAW-BURNING TRACTION ENGINE.

CALIFORNIA THRESHING RIGS.

- No. 93 Rig—36-inch Cylinder, 52-inch Grain Belt Apron Thresher
 and 14 Horse Traction Engine, \$2,000
 No. 95 Rig—40-inch Cylinder, 56-inch Grain Belt Apron Thresher
 and 14 Horse Traction Engine, 2,040
 No. 97 Rig—40-inch Cylinder, 56-inch Grain Belt Apron Thresher
 and 18 to 20 Horse Traction Engine, 2,440

We recommend the above Machines only where an extra quantity of
 heavy work is required of Machines.

EXTRAS.

- Wagon Elevator to load into Wagons, \$75
 Elevator and Bagger, does not tally, 25

The above Machines can be examined at our Branch Houses:

The Pitts Agricultural Works, Fargo, D. T.
 The Pitts Agricultural Works, Minneapolis, Minn.

Where correspondence and orders for these celebrated Buffalo Pitts
 Machines should be addressed.

PORTABLE STEAM ENGINES.

Each Engine is complete, with Safety Plug, Spark Arrester, Steam and
 Water Gauges, Pop Safety Valve, Whistle, Judson Governor (with Change-
 able Speed), Pump, and all Latest Appliances.

With all Engines we furnish free Wrenches (including one Pipe
 Wrench), Oil Can, Flue Cleaner, Poker, Suction Hose, Sprinkling Hose,
 Pole, Neck Yoke and Whiffletrees.

If Injector is wanted on Plain or Traction Engines add \$25.

No deduction allowed for articles on free list not taken.

COAL-OR WOOD-BURNING PLAIN ENGINES.

MOUNTED ON WOODEN OR IRON WHEELS.

- | No. | Cyl. | Plain Engine, on Trucks, Boiler 20-in. waist, | \$400 |
|--|---------|---|-------|
| 4—Four Horse | 4 x 7 | " " " " " 24 " " | 750 |
| 6—Six Horse | 5½ x 9 | " " " " " 25 " " | 850 |
| 8—Eight Horse | 6½ x 9 | " " " " " 27 " " | 1,000 |
| 10—Ten Horse | 7½ x 10 | " " " " " 29 " " | 1,150 |
| 13—Thirteen Horse | 8½ x 10 | " " " " " 31 " " | 1,300 |
| *18—Eighteen to Twenty Horse (9x10 Cyl.) Plain Engine, on Trucks,
Boiler 33-inch waist, | | | 1,500 |

COAL-OR WOOD-BURNING PLAIN ENGINES.

MOUNTED ON SILLS OR SKIDS.

- | No. | Cyl. | Plain Engine, on Skids, Boiler 20-in. waist, | \$550 |
|---|---------|--|-------|
| 4—Four Horse | 4 x 7 | " " " " " 24 " " | 700 |
| 6—Six Horse | 5½ x 9 | " " " " " 25 " " | 800 |
| 8—Eight Horse | 6½ x 9 | " " " " " 27 " " | 900 |
| 10—Ten Horse | 7½ x 10 | " " " " " 29 " " | 1,050 |
| 13—Thirteen Horse | 8½ x 10 | " " " " " 31 " " | 1,200 |
| *18—Eighteen to Twenty Horse (9x10 Cyl.) Plain Engine, on Skids,
Boiler 33-inch waist, | | | 1,400 |

COAL-OR WOOD-BURNING TRACTION ENGINES.

Complete with Patent Locomotive Link Reverse, Self-Steering
 Attachment, Wide Drive Wheels and Eight Mud Claws.

- | No. | Cyl. | Traction Engine, Boiler 24-inch waist, | \$1,000 |
|--|---------|--|---------|
| 6—Six Horse | 5½ x 9 | " " " " " 25 " " | 1,100 |
| 8—Eight Horse | 6½ x 9 | " " " " " 27 " " | 1,200 |
| 10—Ten Horse | 7½ x 10 | " " " " " 29 " " | 1,350 |
| 13—Thirteen Horse | 8½ x 10 | " " " " " 31 " " | 1,500 |
| *18—Eighteen to Twenty Horse (9x10 Cyl.) Traction Engine, Boiler
33-inch waist, | | | 1,800 |

STRAW-BURNING PLAIN ENGINES.

MOUNTED ON IRON WHEELS.

BOILERS JACKETED.

- No. S. B. 14—Fourteen Horse (8½x10 Cyl.) Straw-Burning Engine,
 on Trucks, Boiler 31-inch waist, \$1,300
 *No. S. B. 18—Eighteen to Twenty Horse (9x10 Cyl.) Straw-Burning
 Engine, on Trucks, Boiler 33-inch waist, 1,600

STRAW-BURNING TRACTION ENGINES.

BOILERS JACKETED.

Complete with Patent Locomotive Link Reverse Steering
 Attachment, Wide Drive Wheels and Eight Mud Claws.

- No. S. B. 14—Fourteen Horse (8½x10 Cyl.) Traction Straw-Burning
 Engine, Boiler 31-inch waist, \$1,500
 *No. S. B. 18—Eighteen to Twenty Horse (9x10 Cyl.) Traction Straw-
 Burning Engine, Boiler 33-inch waist, 1,900

EXTRAS.

- Four Wheel Water and Coal Cart, \$75
 Buffalo Pitts Patent Brake, for Traction Engines, 30
 Water Tanks on Platform of Engine, 20

(*No. 18 is Centre Crank Engine, with two Fly Wheels and High Speed.
 See Catalogue for illustration.)

Levers, Tumbling Rods, or any other parts of machines not wanted, will
 be deducted at one-half of their price given in the Printed Price List of
 Repairs.

TABLE OF DIMENSIONS OF BUFFALO PITTS COAL- OR WOOD-BURNING PLAIN AND TRACTION ENGINES.

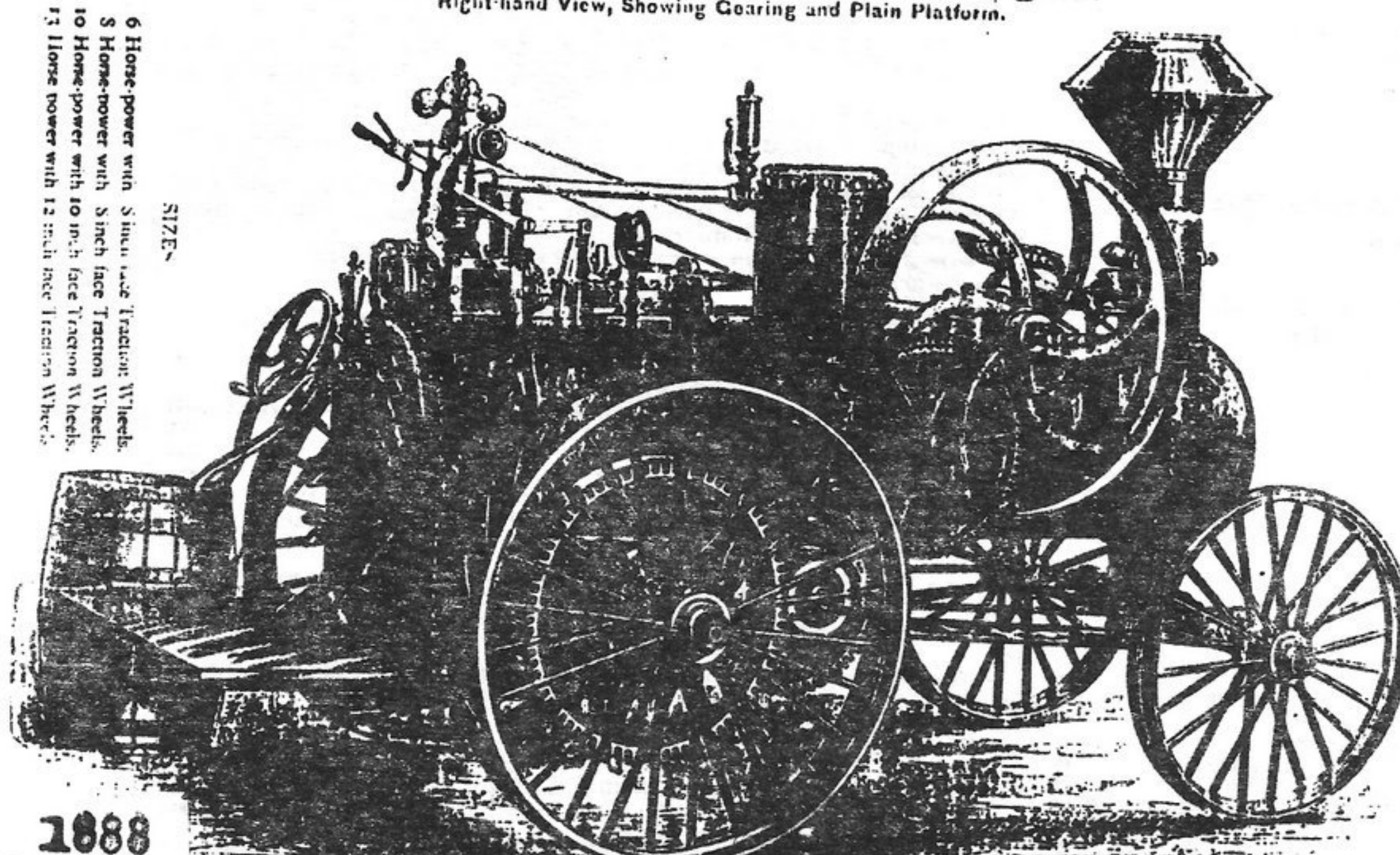
1886	Number of Engine.	Horse-Power.	CYLINDER.		BOILER.							FLY-WHEEL.		Revolutions per Minute.	TRACTION WHEELS.	
			Diameter in inches.	Length of Stroke in inches.	FIRE-BOX.			SHELL Diameter in inches.	Number.	FLUES.		Diameter in inches.	Width of Face in inches.		Diameter in inches.	Width of Face in inches.
					Height in inches.	Length in inches.	Width in inches.			Diameter in inches.	Length in inches.					
PLAIN ENGINES, mounted on Wheels or Skids.	4	4	4	7	27½	24	16½	20	19	2	44	28	5½	325	.....	.....
	6	6	5½	9	32	30	19½	24	26	2	60	36	6½	225	.....	.....
	8	8	6½	9	32	32	21	25	30	2	66	36	6½	225	.....	.....
	10	10	7½	10	33	36	23	27	36	2	66	44	8½	190	.....	.....
	13	13	8½	10	34½	40	25	29	43	2	66	44	8½	190	.....	.....
	18	18 to 20	9	10	38	44	29	33	54	2	76	48	10½	175	.....	.....
TRACTION ENGINES.	6	6	5½	9	32	30	19½	24	26	2	60	36	6½	225	55	8
	8	8	6½	9	32	32	21	25	30	2	66	36	6½	225	55	8
	10	10	7½	10	33	36	23	27	36	2	66	44	8½	190	55	10
	13	13	8½	10	34½	40	25	29	43	2	66	44	8½	190	55	12
	18	18 to 20	9	10	38	44	29	33	54	2	76	48	10½	200	60	16

TABLE OF THE DIMENSIONS OF BUFFALO PITTS STRAW-BURNING ENGINES.

1886	No. of Engine.	Horse-Power.	CYLINDER.		BOILER.								FLY-WHEEL.		Revolutions per Minute.	TRACTION WHEELS.		
			Diameter in inches.	Length of Stroke in inches.	FIRE-BOX.			SHELL Diameter in inches.	FLUES.			MAIN FLUE.		Diameter in inches.		Width of Face in inches.	Diameter in inches.	Width of Face in inches.
					Height in inches.	Length in inches.	Width in inches.		Number.	Diameter in inches.	Length in inches.	Diameter in inches.	Length in inches.					
Plain, mounted on Iron Wheels....	S. B. 14	14	8¾	10	34½	36	25	31	18	3	96	14	57	44	8½	190	.....	.....
	S. B. 18	18 to 20	9	10	37	36	28	33	20	3	99	16	60	36 48	6½ 10½	200	.....	.....
Traction.....	S. B. 14	14	8¾	10	34½	36	25	31	18	3	96	14	57	44	8½	190	55	12
	S. B. 18	18 to 20	9	10	37	36	28	33	20	3	99	16	60	36 48	6½ 10½	200	60	16

Coal or Wood Burner Traction Engine.

Right-hand View, Showing Gearing and Plain Platform.



BUFFALO PITTS ENGINES AND THRESHERS.

At its peak it was one of the world's largest producers of heavy agricultural and road building machinery, in 1888 making 800 threshers and 400 engines.

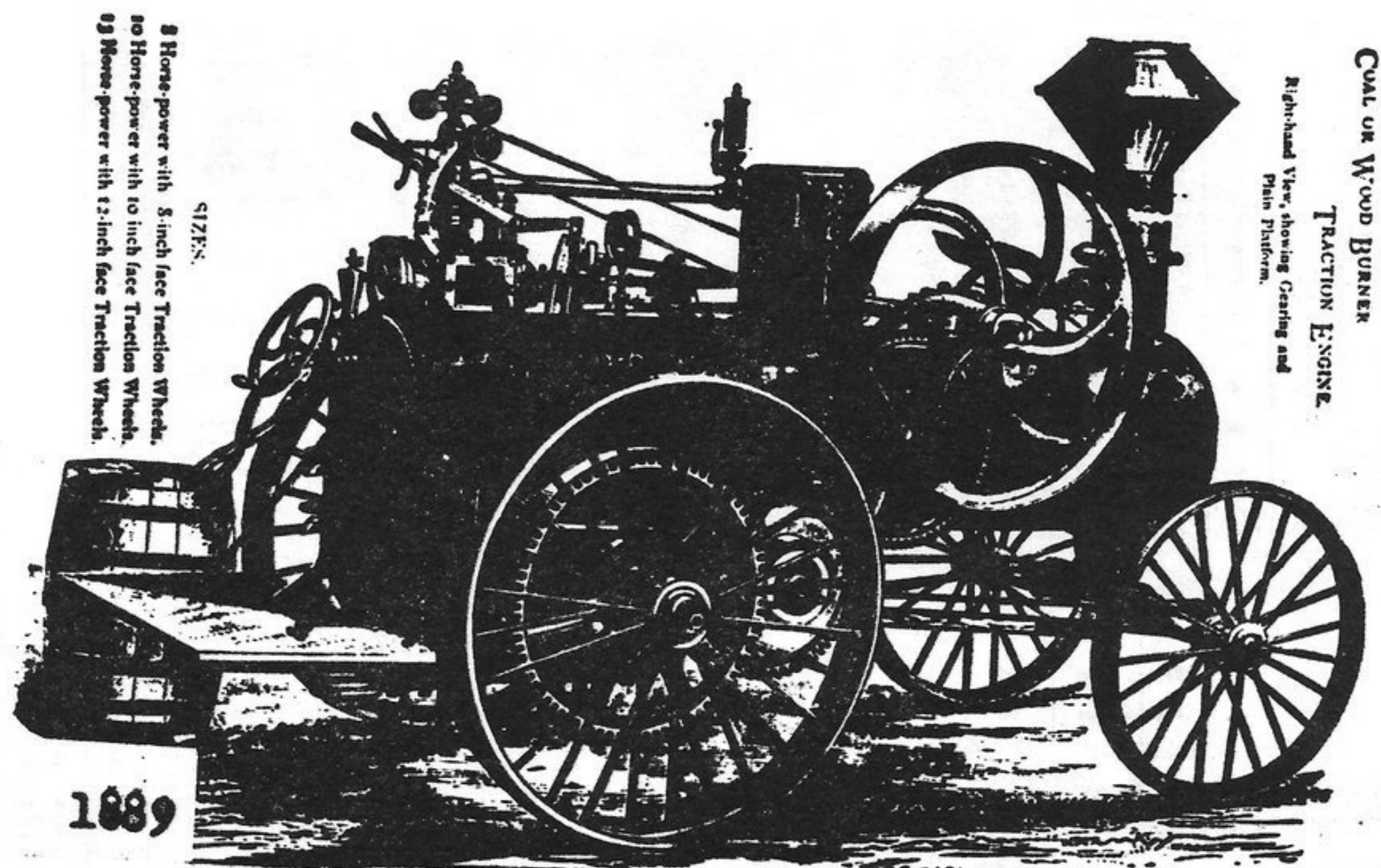
TABLE OF DIMENSIONS OF BUFFALO PITTS COAL OR WOOD BURNING PLAIN AND TRACTION ENGINES.
(For Straw Burning Engines and Dimensions, see page 30 and price list.)

1888	Number of Engine.	Horse-power.	CYLINDER.		BOILER.							FLY-WHEEL.		Revolutions per Minute.	TRACTION WHEELS.	
			Diameter in inches.	Length of Stroke in inches.	FIRE-BOX.			SHELL Diameter in inches.	FLUES.			Diameter in inches.	Width of Face in inches.		Diameter in inches.	Width of Face in inches.
					Height in inches.	Length in inches.	Width in inches.		Number.	Diameter in inches.	Length in inches.					
PLAIN ENGINES, mounted on Wheels or Skids.	4	4	4	7	27½	24	16½	20	19	2	44	28	5½	325		
	6	6	5½	9	32	30	19½	24	26	2	60	36	6½	275		
	8	8	6½	9	32	32	21	25	30	2	66	36	6½	275		
	10	10	7½	10	33	36	23	27	36	2	66	44	8½	230		
	13	13	8½	10	34½	40	25	29	43	2	66	44	8½	230		
	18	18 to 20	9	10	38	44	29	33	54	2	76	48	10½	240		
TRACTION ENGINES.	6	6	5½	9	32	30	19½	24	26	2	60	36	6½	275	55	8
	8	8	6½	9	32	32	21	25	30	2	66	36	6½	275	55	8
	10	10	7½	10	33	36	23	27	36	2	66	44	8½	230	55	10
	13	13	8½	10	34½	40	25	29	43	2	66	44	8½	230	55	12

TABLE OF THE DIMENSIONS OF BUFFALO PITTS STRAW-BURNING ENGINES.

TABLE OF THE DIMENSIONS OF REPAID TYPE STEAM-BURNING ENGINES.																		
1888	No. of Engine.	Horse-power.	CYLINDER.			BOILER.							FLY-WHEEL.		Revolutions per Minute.	TRACTION WHEELS.		
			Diameter in inches.	Length of Stroke in inches.	FIRE-BOX.			SHELL. in inches.	Number.	FLUES.		MAIN FLUE.		Diameter in inches.		Width of Face in inches.		
					Height in inches.	Length in inches.	Width in inches.			Diam. in inches.	Length in inches.	Diam. in inches.	Length in inches.					
Plain, mounted on Iron Wheels . .	S. B. 10	10	7 3/4	10	29	31	22	28	12	3	90	12	56	44	8 1/2	190		
	S. B. 14	14	8 3/4	10	34 1/2	36	25	31	15	3	96	14	56	44	8 1/2	190		
	S. B. 16	16	8 1/2	10	37	38	27	32 1/2	19	3	96	14	56	44	8 1/2	230		
Traction . .	S. B. 10	10	7 3/4	10	29	31	22	28	12	3	90	12	56	44	8 1/2	190	55	12
	S. B. 14	14	8 3/4	10	34 1/2	36	25	31	15	3	96	14	56	44	8 1/2	190	55	14
	S. B. 16	16	8 1/2	10	37	38	27	32 1/2	19	3	96	14	56	44	8 1/2	230	55	14

25 Horse-power Traction Straw Burners built to order.

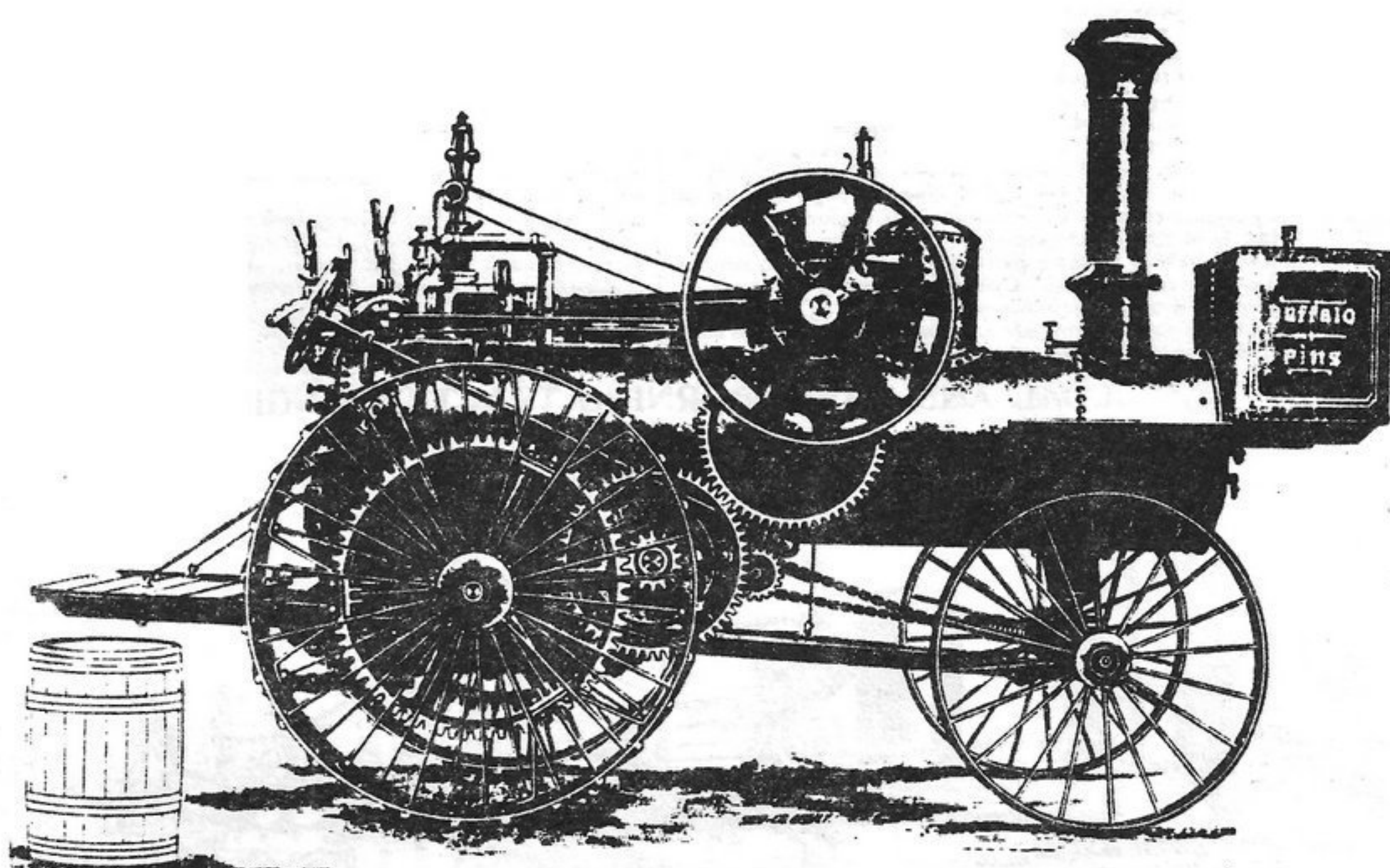
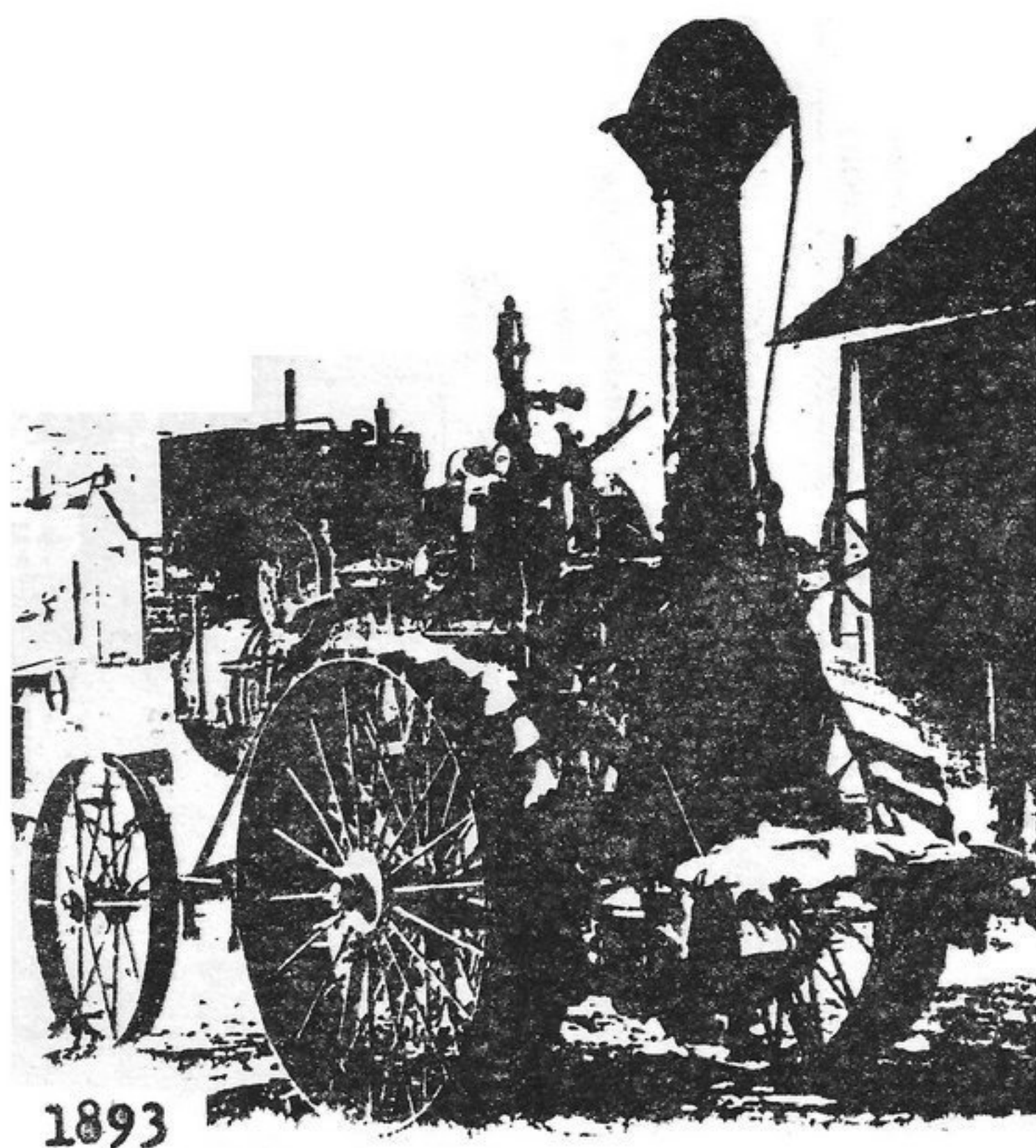


SIZES:
8 Horse-power with 5-inch face Traction Wheels.
10 Horse-power with 10-inch face Traction Wheels.
13 Horse-power with 12-inch face Traction Wheels.

COAL OR WOOD BURNER
TRACTION ENGINE
Right-hand View, showing Cranking and
Plain Platform.

TABLE OF DIMENSIONS OF BUFFALO PITTS COAL OR WOOD BURNING PLAIN AND TRACTION ENGINES.

1889	Number of Engine.	Horse-power.	CYLINDER.		FIRE-BOX.			BOILER.		FLUES.		FLY-WHEEL.		Revolutions per Minute.	TRACTION WHEELS.	
			Diameter in Inches.	Length of Stroke in Inches.	Height in Inches.	Length in Inches.	Width in Inches.	Diameter in Inches.	Number.	Diameter in Inches.	Length in Inches.	Diameter in Inches.	Width of Face in Inches.		Diameter in Inches.	Width of Face in Inches.
PLAIN ENGINES, mounted on Wheels or Skids.	6	6	5½	9	32	30	19½	24	26	2	60	36	6½	275		
	8	8	6½	9	32	32	21	25	30	2	66	36	6½	275		
	10	10	7½	10	33	36	23	27	36	2	66	44	8½	230		
	13	13	8½	10	34½	40	25	29	43	2	66	44	8½	230		
	18	18 to 20	9	10	38	44	29	33	54	2	76	48	10½	240		
TRACTION ENGINES.	8	8	6½	9	32	32	21	25	30	2	66	36	6½	275	55	8
	10	10	7½	10	33	36	23	27	36	2	66	44	8½	230	55	10
	13	13	8½	10	34½	40	25	29	43	2	66	44	8½	230	55	12



15-HORSE POWER COAL OR WOOD-BURNER TRACTION ENGINE.
With Friction Clutch, 16-inch Wrought Steel Wheels, 66 inches diameter.

The Pitts Agricultural Works, Buffalo, N. Y., U. S. A.

1894

1893

1889

TABLE OF THE DIMENSIONS OF BUFFALO PITTS STRAW BURNING ENGINES.

	No. of Engine.	Horse-power.	CYLINDER.		BOILER.								FLY-WHEEL.		Revolutions per Minute.	TRACTION WHEELS.	
			Diameter in Inches.	Length of Stroke in Inches.	FIRE-BOX.			SHRDL.	Number.	FLUES.		MAIN FLUE.		Diameter in Inches.	Width of Face in Inches.	Diameter in Inches.	Width of Face in Inches.
					Height in Ins.	Length in Ins.	Width in Ins.			Diam. in Ins.	Length in Ins.	Diam. in Ins.	Length in Ins.				
Plain, mounted on Iron Wheels	S. B. 12	12	8	10	36	36	24	29½	15	3	93	12	54	44	8½	230	
	S. B. 16	16	8½	10	37	38	27	32½	19	3	96	14	56	44	8½	230	
Traction . .	S. B. 12	12	8	10	36	36	24	29½	15	3	93	12	54	44	8½	230	55
	S. B. 16	16	8½	10	37	38	27	32½	19	3	96	14	56	44	8½	230	55

18 and 25 Horse-power Traction saw Burners built to order.

Table of Dimensions of Buffalo Pitts Coal or Wood-burning Plain or Traction Engines.

Style of Engine	No. of Engine	Horse Power	CYLIN- DER		BOILER								FLY WHEEL		Revolutions per Minute	TRACTION WHEELS	
			Diameter in Inches	Length of Stroke in Inches	FIRE BOX			SHELL	FLUES			Diameter in Inches	Width of Face in Inches	Diameter in Inches		Width of Face in Inches	
					Height in Inches	Length in Inches	Width in Inches		Diameter in Inches	No.	Diameter in Inches						Length in Inches
Plain Engines mounted on Wheels or Skids	8	8	6½	9	32	32	21	26	30	2	60	36	6½	275	...	...	
	10	10 to 12	7½	10	33	36	23	27	36	2	66	36	8½	250	...	...	
	15	15	8½	10	34½	40	25	30	41	2	72	40	8½	240	...	...	
	20	20	9	10	38	44	29	33	54	2	76	40	10½	240	...	...	
Traction Engines.	8	8	6½	9	32	32	21	26	30	2	66	36	6½	275	55	8	
	10	10 to 12	7½	10	33	36	23	27	36	2	66	36	8½	250	60	12	
	15	15	8½	10	34½	40	25	30	41	2	72	40	8½	240	66	16	
	20	20	9	10	38	44	29	33	54	2	76	40	10½	240	66	18	

1894

THE PITTS AGRICULTURAL WORKS, BUFFALO, N. Y., U. S. A.

8-Horse Traction Engine.—We build this the same as last season, with cast-iron road wheels, 8 inches wide, 55 inches diameter. We also build this for a very light traction engine, for small machines in hilly districts. The engine is the parallel slide-bar style and all fittings the same as other coal and wood burners, except that it has not the friction clutch nor Woolf reverse.

Our 10 and 13-Horse Power Boilers and Engines for the season of 1895 are made from new and improved patterns and designs, embodying in their construction the best principles known in the art of boiler and engine building, in their class, also workmanship and material.

The fire box and heating surface of boilers have been duly proportioned to amount of power required of the engines, and both are identically the same except as to sizes of parts and capacity of each.

The following specifications of boiler material and construction are the same throughout for all of our boilers.

Furnace casing, made of one-piece No. 1 shell steel, ¾-inch thick, 60,000 lbs. tensile strength.

Fire box, made of one-piece best quality flanged fire-box steel, ¾-inch thick, casikled inside and out.

Shell, made of one-piece No. 1 shell steel, ¾-inch thick, 60,000 lbs. tensile strength, seams double riveted.

Heads and tube sheets, best quality of flanged steel, tube sheets ¾-inch thick, holes for tubes reamed.

Tubes, very best quality of 2-inch, lap welded, fitted into tube sheets with copper gaskets of the approved thickness adopted by the best locomotive boiler builders. All tubes arranged in vertical rows with ample spaces between, providing for perfect water circulation; fire box entirely surrounded by water, large steam space and large high domes.

Stay bolts, best quality refined iron, ¾-inch diameter, screwed into plates and riveted in a thorough manner.

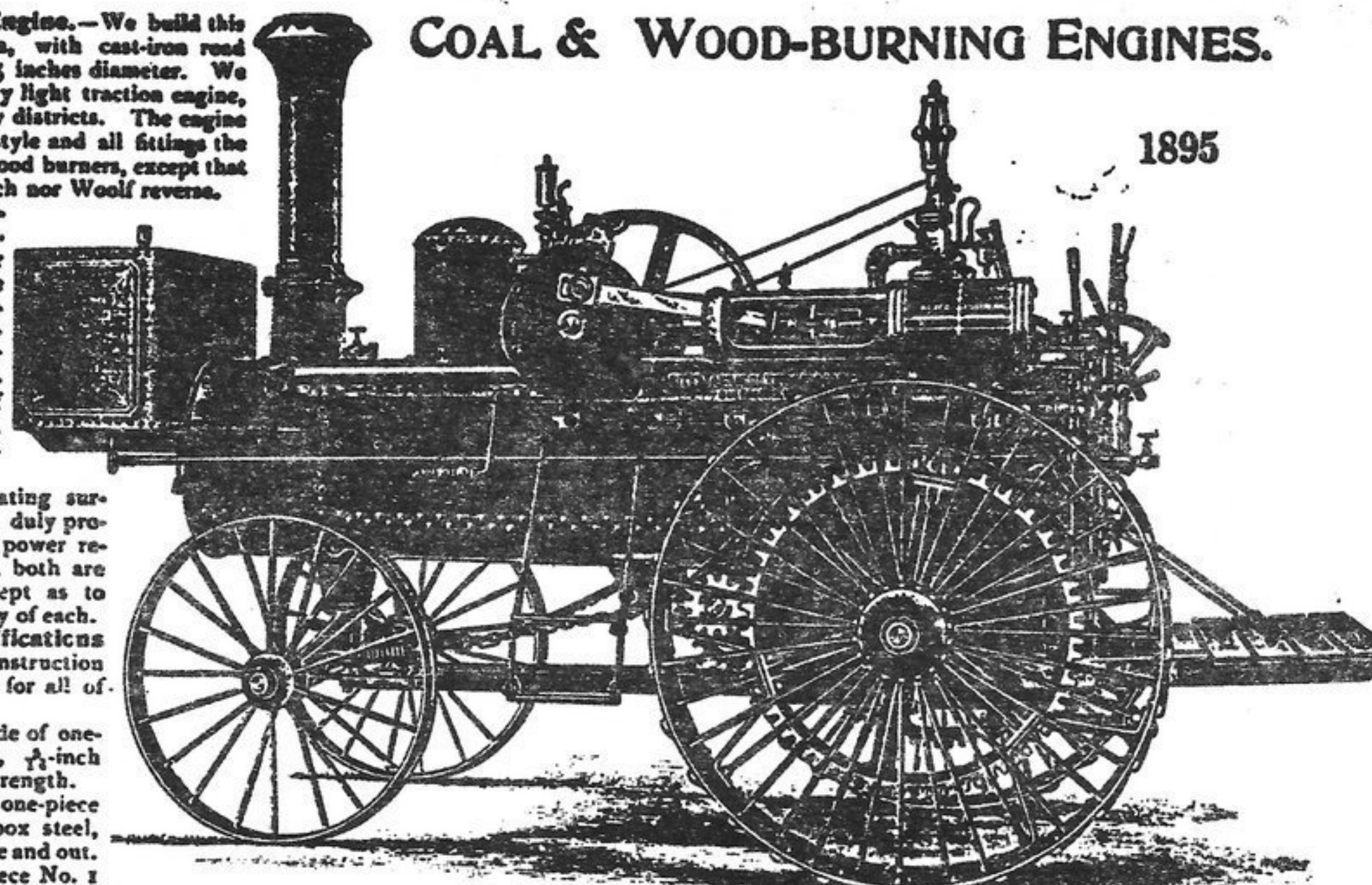
The boilers are supplied by the Moore independent steam pump and Featherby injector, which are compactly and conveniently arranged for easy access to all the parts. All feed water passes through the heater into boiler below the water-line, midway between the fire box and front end of boiler. 100-gallon steel tank on front of boiler, into which water is supplied or taken from, either with pump or injector. All boilers are fitted with the best make of steam and water gauges, pop safety valve, fusible plugs and all necessary brasses of the best quality.

Live steam is conducted from top of dome through interior of boiler direct to governor chamber and steam chest of engine.

The engine is of the bored-guide type, which provides for self-adjustment and alignment of working parts, and simplifies by dispensing with many pieces in its construction. Cylinder and guides are made in separate pieces, which provides for independent renewal of these parts. The cylinder and crank shaft bearing are each mounted on opposite ends of heater, thus avoiding disturbance of working parts by the extreme

COAL & WOOD-BURNING ENGINES.

1895



10 and 13-Horse Power Coal or Wood-burner Traction. Left-hand View.

expansion and contraction of boiler. All cast, wrought iron or steel parts are attached to boiler with bolt ends and nuts on outside of parts.

The piston connection with crank wheel is our solid-steel connection rod, in which we dispense with straps and gibs.

Steam is admitted to engine by our well-tryed, quick-opening balanced throttle valve, lubricated with the Swift sight-feed lubricator (all other parts lubricated by solid-brass oil cups) and speed is regulated by the Pickering governor.

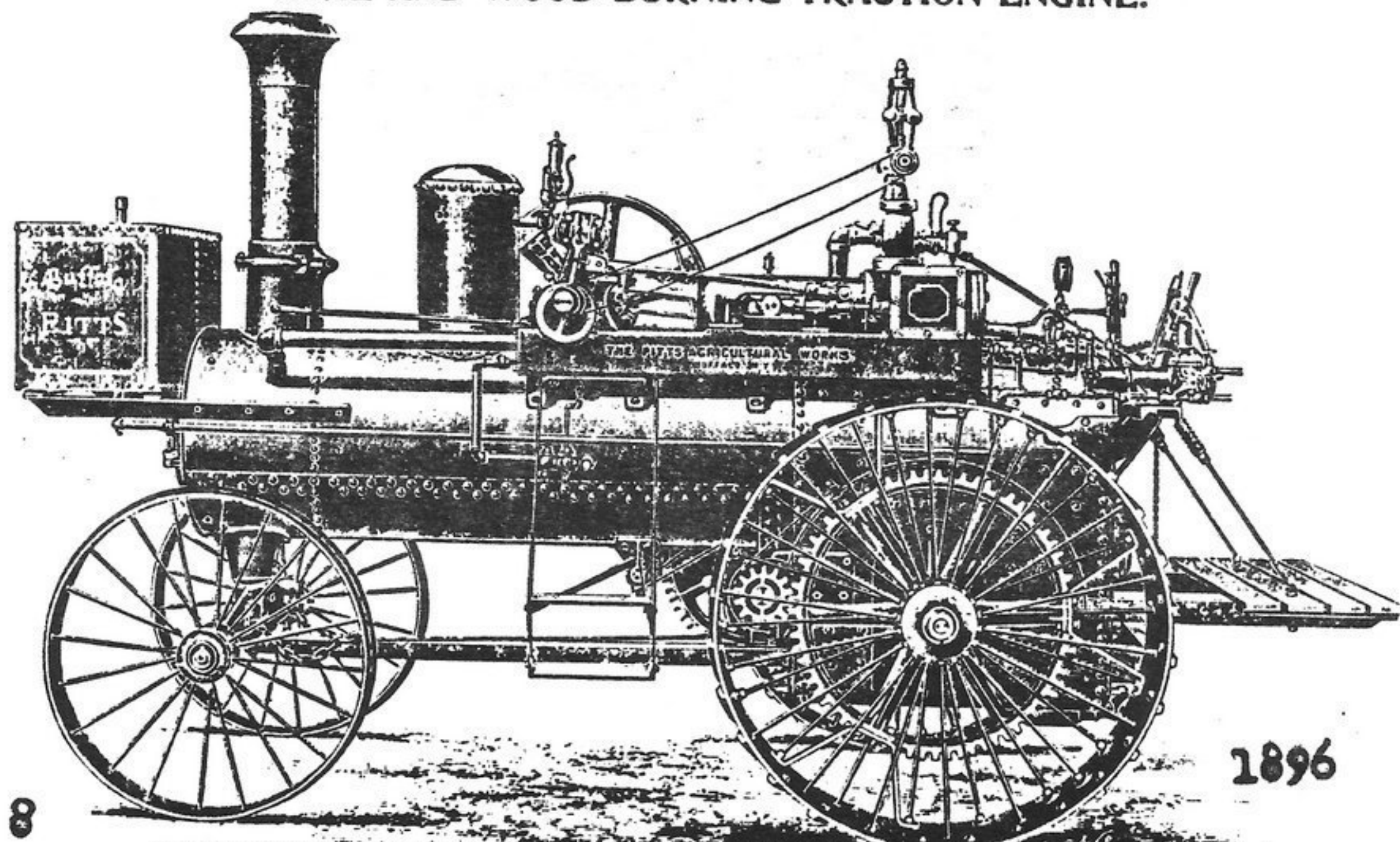
The engines are equipped with the Woolf patent reverse valve gear, and our three-point bearing friction clutch, friction clutch lever, and steering hand wheel, all on the right-hand side; CAST STEEL PINIONS, properly tempered to give strength, smooth wear and durability on all countershafts.

10-horse power, boiler 26-inch waist, cylinder 7 inches diameter, 10-inch stroke, face wheel 20 inches diameter, crank pin 1½ inches diameter, crank shaft 2½ inches, countershaft 2¾ inches diameter, mounted on our new wrought-steel traction wheels, 60 inches diameter, with 10-inch face.

13-horse power, boiler 29-inch waist, cylinder 7½ inches diameter, 10-inch stroke, face wheel 20 inches diameter, crank pin 1½ inches diameter, crank shaft 2½ inches, countershaft 2¾ inches diameter, mounted on wrought-steel traction wheels, 64 inches diameter, 14-inch face.

Clymer

COAL AND WOOD-BURNING TRACTION ENGINE.



1896

New 20 Horse-power. Center Crank. Left-hand View.

THE PITTS AGRICULTURAL WORKS, BUFFALO, N. Y., U. S. A.

COAL OR WOOD-BURNING ENGINES. 1896

Table of Dimensions of Buffalo Pitts Coal or Wood-burning Plain or Traction Engines

CYLINDER	BOILER						BAND WHEEL			
	FIRE BOX			WAIST	TUBES		Diameter in Inches		Length in Inches	
	Height in Inches	Length in Inches	Width in Inches		Number	Diameter in Inches				
10	32	34	25	25	26	2	60	36	10	10
12	32	34	25	25	26	2	60	36	10	10
14	32	34	25	25	26	2	60	36	10	10
16	32	34	25	25	26	2	60	36	10	10
18	32	34	25	25	26	2	60	36	10	10
20	32	34	25	25	26	2	60	36	10	10
22	32	34	25	25	26	2	60	36	10	10
24	32	34	25	25	26	2	60	36	10	10
26	32	34	25	25	26	2	60	36	10	10
28	32	34	25	25	26	2	60	36	10	10
30	32	34	25	25	26	2	60	36	10	10
32	32	34	25	25	26	2	60	36	10	10
34	32	34	25	25	26	2	60	36	10	10
36	32	34	25	25	26	2	60	36	10	10
38	32	34	25	25	26	2	60	36	10	10
40	32	34	25	25	26	2	60	36	10	10
42	32	34	25	25	26	2	60	36	10	10
44	32	34	25	25	26	2	60	36	10	10
46	32	34	25	25	26	2	60	36	10	10
48	32	34	25	25	26	2	60	36	10	10
50	32	34	25	25	26	2	60	36	10	10
52	32	34	25	25	26	2	60	36	10	10
54	32	34	25	25	26	2	60	36	10	10
56	32	34	25	25	26	2	60	36	10	10
58	32	34	25	25	26	2	60	36	10	10
60	32	34	25	25	26	2	60	36	10	10
62	32	34	25	25	26	2	60	36	10	10
64	32	34	25	25	26	2	60	36	10	10
66	32	34	25	25	26	2	60	36	10	10
68	32	34	25	25	26	2	60	36	10	10
70	32	34	25	25	26	2	60	36	10	10
72	32	34	25	25	26	2	60	36	10	10
74	32	34	25	25	26	2	60	36	10	10
76	32	34	25	25	26	2	60	36	10	10
78	32	34	25	25	26	2	60	36	10	10
80	32	34	25	25	26	2	60	36	10	10
82	32	34	25	25	26	2	60	36	10	10
84	32	34	25	25	26	2	60	36	10	10
86	32	34	25	25	26	2	60	36	10	10
88	32	34	25	25	26	2	60	36	10	10
90	32	34	25	25	26	2	60	36	10	10
92	32	34	25	25	26	2	60	36	10	10
94	32	34	25	25	26	2	60	36	10	10
96	32	34	25	25	26	2	60	36	10	10
98	32	34	25	25	26	2	60	36	10	10
100	32	34	25	25	26	2	60	36	10	10

1894

Table of Dimensions of the Buffalo Pitts Straw-burning Engines.

Style of Engine	No. of Engine	Horse Power	CYLIN- DER		BOILER								FLY WHEEL		TRAC- TION WHEELS			
			Diameter in Inches	Length of Stroke in Inches	FIRE BOX			SHELL	FLUES		MAIN FLUE		Diameter in Inches	Width of Face in Inches	Revolutions per Minute	Diameter in Inches	Width of Face in Inches	
					Height in Inches	Length in Inches	Width in Inches		Diameter in Inches	Number	Diameter in Inches	Length in Inches						Diameter in Inches
Plain, mounted on Iron Wheels	S. B. 15	15	8½	10	36½	38	26	33½	19	3	102	14	60	40	9	250	66	14
	S. B. 18	18	8½	10	37½	36	27½	35½	20	3	108	13	69½	40	9	250	66	16
Traction	S. B. 12	12	8	10	38	36	23½	29½	15	3	96	12	56	40	9	250	66	14
	S. B. 15	15	8½	10	36½	38	26	33½	19	3	102	14	60	40	9	250	66	16
	S. B. 18	18	8½	10	37½	36	27½	35½	20	3	108	13	69½	40	9	250	66	13

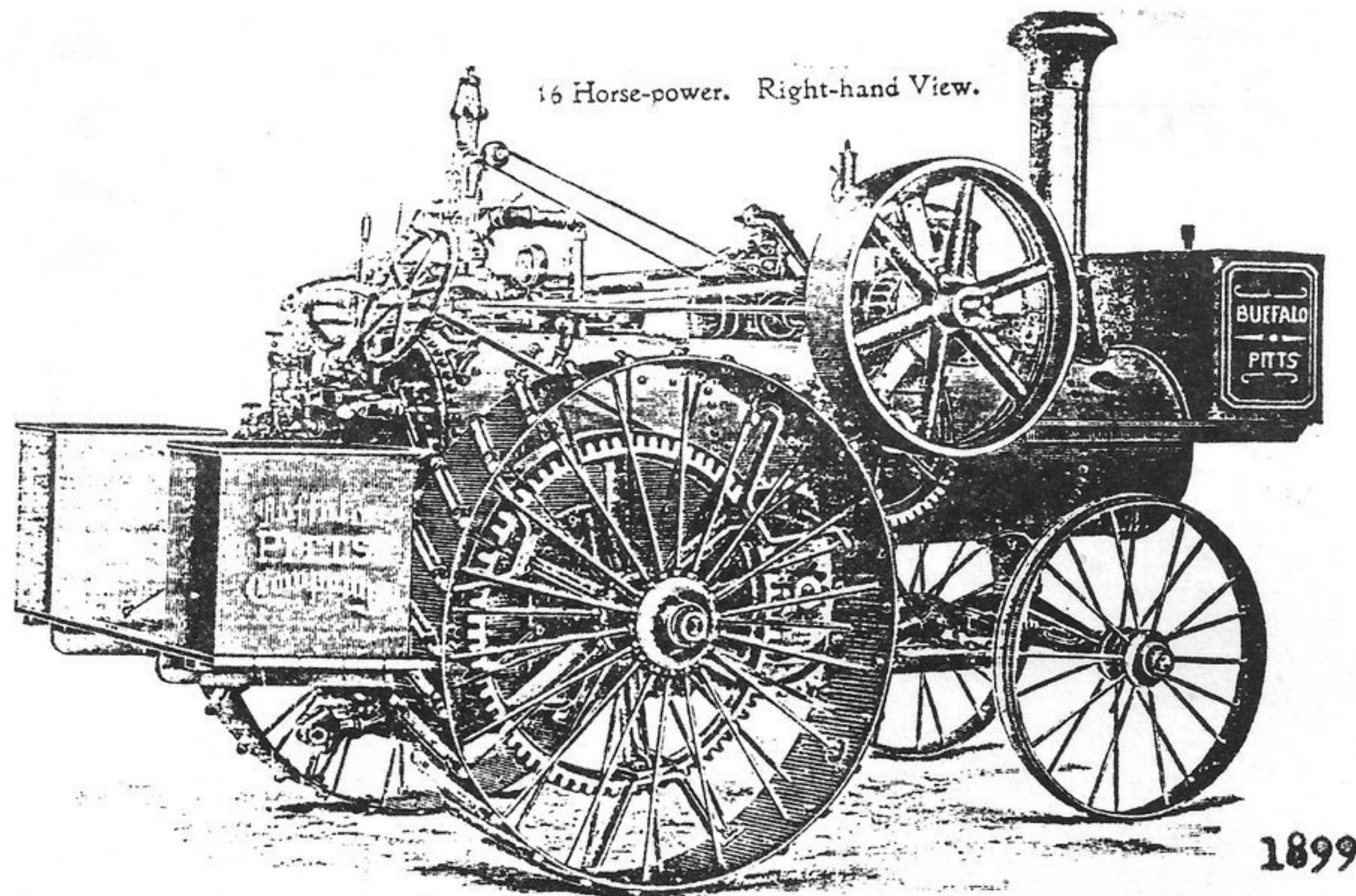
Our 18-Horse Straw Burner will develop 20-horse power and drive any thrasher in the world.

STRAW-BURNING ENGINES.

1896

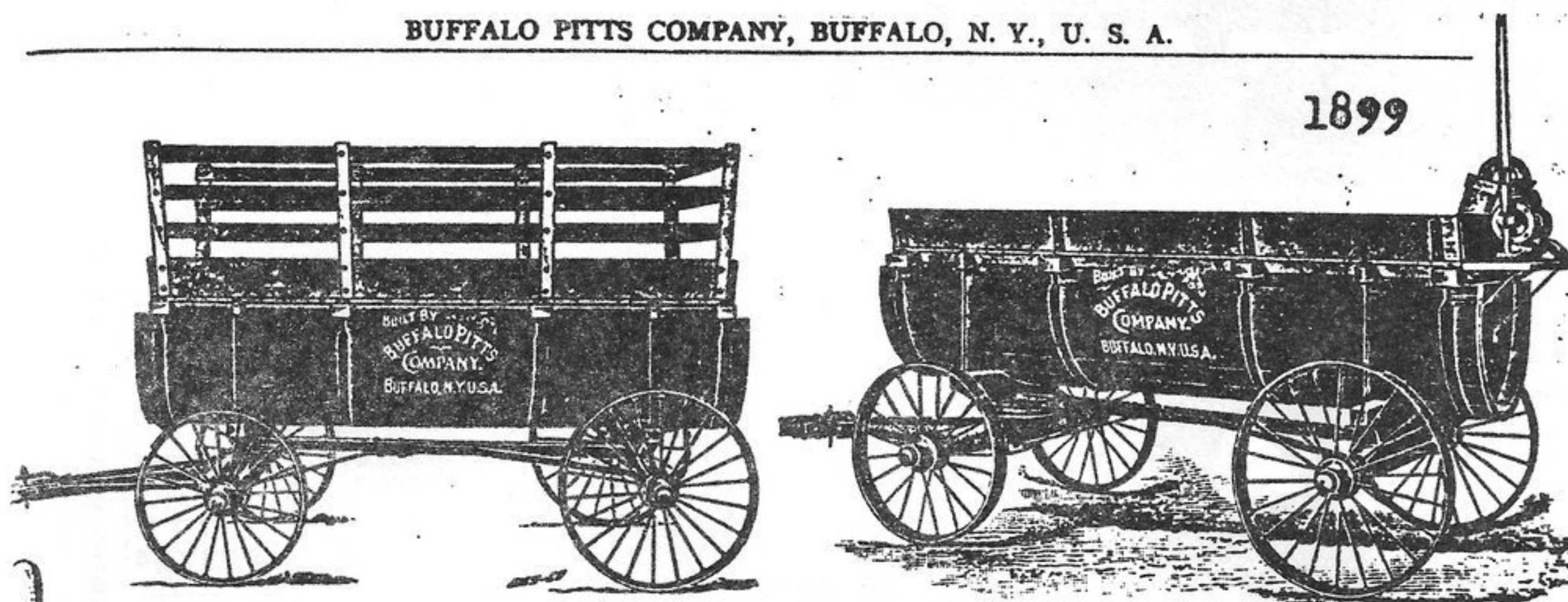
Table of Dimensions of the Buffalo Pitts Straw-burning Engines.

STYLE OF ENGINE	NO. OF ENGINE	HORSE POWER	CYLINDER		BOILER										BAND FLY WHEEL			TRACTION WHEELS		
			Diameter in inches	Length of Stroke in inches	FIRE BOX					Waist Diameter in inches	TUBES			MAIN FLUE		Diameter in inches	Width of Face in inches	Revolutions per Minute	Diameter in inches	Width of Face in inches
					Height in inches	Length in inches	Width in inches	Cubic inches	Square Inches Grate Surface per H. P.		Number	Diameter in inches	Length in inches	Diameter in inches	Length in inches					
Mounted on Iron Wheels	S. B. 16	16	8 1/4	10	36 1/2	38	26	36,062	62	33 1/2	19	3	102	14	60	40	8 1/2	250		
	S. B. 20	20	8 1/2	11	37 1/2	36	27 1/2	37,125	55	35 1/2	20	3	108	15	69 1/2	40	8 1/2	250		
Traction	S. B. 14	14	8	10	38	36	23 1/2	32,148	70 1/2	29 1/2	15	3	96	12	56	40	8 1/2	250	66	14
	S. B. 16	16	8 1/2	10	36 1/2	38	26	36,062	62	31 1/2	19	3	102	14	60	40	8 1/2	250	66	16
	S. B. 20	20	8 1/2	11	37 1/2	36	27 1/2	37,125	55	33 1/2	20	3	108	15	69 1/2	40	9	250	66	18
	S. B. 25	25	9 1/2	12	42	44	30 1/2	64,680	62	37 1/2	25	3	114	15	69 1/2	46	9 1/2	250	66	20



COAL AND WOOD-BURNING TRACTION ENGINE.

BUFFALO PITTS COMPANY, BUFFALO, N. Y., U. S. A.



COAL AND WATER WAGONS FOR TRACTION ENGINES.

We show above our new water and fuel wagons for 1899. The tank holds about 14 barrels, and is of a very convenient shape for turning short corners. We furnish it with a rack around the top, convenient for holding straw when the wagon is to be used for a tender for a straw-burning engine. We fit it with a low-down tank pump, as shown in the illustration, and no thresherman can afford to be without one of these tenders, which, in connection with the water tank on the front end of engine, enables the operator to travel many miles without replenishing his supply of fuel and water. As will be seen, we furnish a slip tongue pole, so that the tank can be attached close to the engine, or used with horses. The tanks are mounted on iron wheels with strong wooden axles.

LOW-DOWN TANK PUMP.

Capacity, 2 Barrels per Minute.

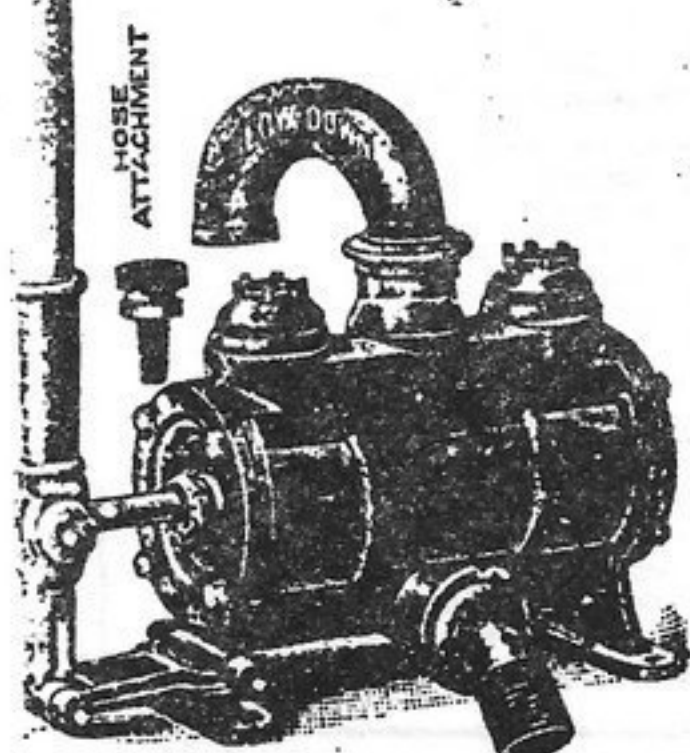
This pump is practicable for the following purposes:

Filling thresher tanks, washing out boilers, for use in shallow wells, draining cellars and barn yards, irrigation purposes, washing wagons, windows, etc., spraying fruit trees, putting out fires, and general use about the farm.

As a protection against fire it is without a rival.

It is fitted with two drip cocks to drain cylinder.

BRASS VALVE SEATS AND METAL PLUNGERS.



1899

1899

COAL OR WOOD-BURNING ENGINES.

Table of Dimensions of Buffalo Pitts Coal or Wood-burning Plain or Traction Engines.

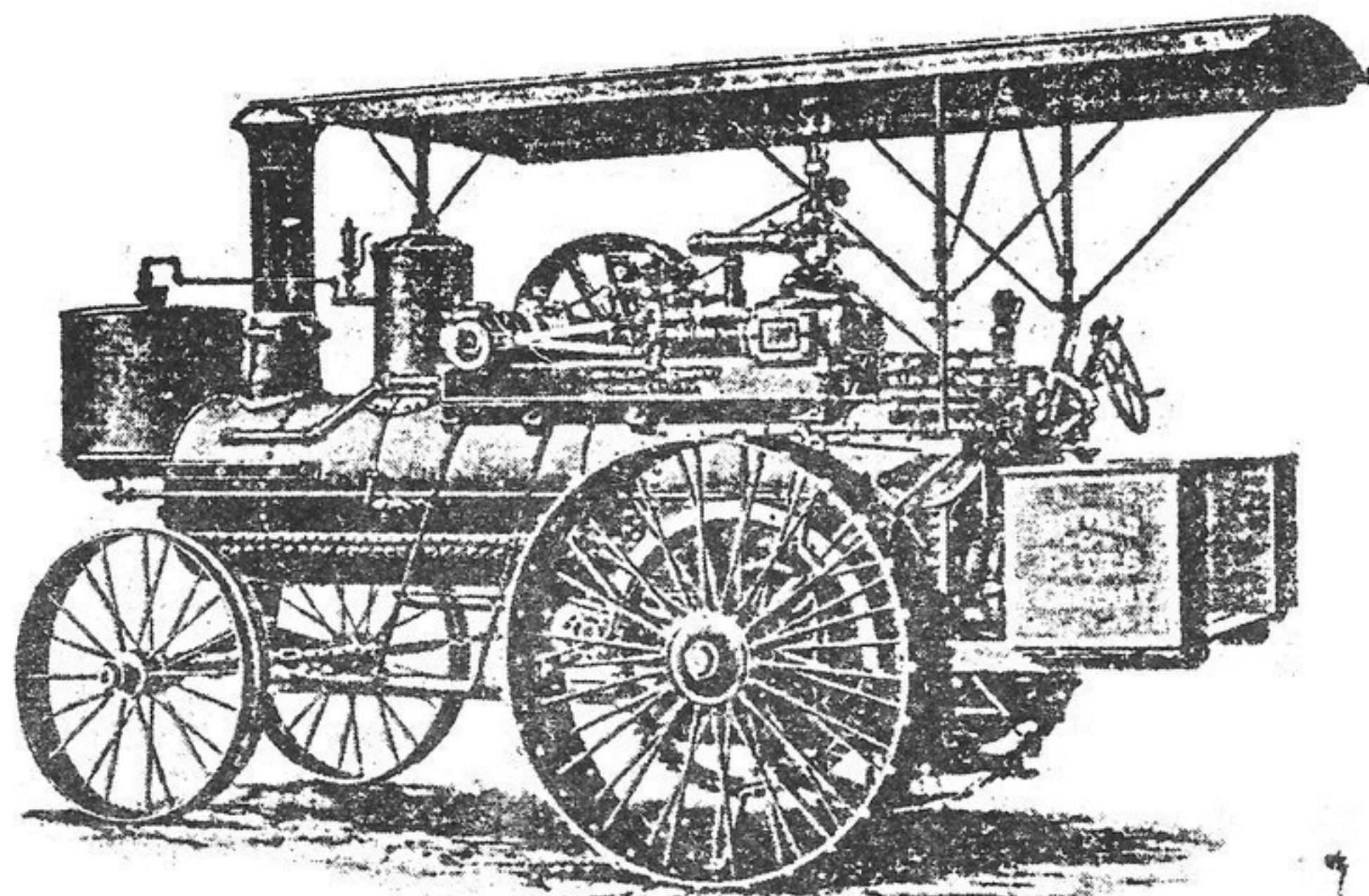
STYLE OF ENGINE	NO. OF ENGINE	HORSE-POWER	CYLINDER		BOILER								BAND FLY WHEEL			TRACTION WHEELS.		
			Diameter in inches	Length of Stroke in inches	FIRE BOX				Square Inches Grate Surface per H. P.	WAIST	TUBES		Diameter in inches	Width of Face in inches	Revolutions per Minute	Diameter in inches	Width of Face in inches	
					Height in inches	Length in inches	Width in inches	Cubic inches			Diameter in inches	Number						Diameter in inches
Plain Engines, Mounted on Wheels or Skids	6	6	5½	9	32	30	19½	18,720	97	25	26	2	60	36	6½	265		
	8	8	6½	9	32	34	21	22,137	89	25	26	2	60	36	6½	265		
	10	10	7	10	33	32	22	23,232	70	26	32	2	60	36	8½	265		
	13	13	7¾	10	38	40	25	30,600	70	29	38	2	66	40	8½	240		
	16	16	8½	10	38	40	26	34,000	67	30	41	2	72	40	8½	240		
	20	20	9	10	40	44	29	45,488	64	33	54	2	76	40	10½	240		
Traction	8	8	6½	9	32	34	21	22,137	89	25	26	2	60	36	6½	265	55	10
	10	10	7	10	33	32	22	23,232	70	26	32	2	60	36	8½	265	60	12
	13	13	7¾	10	38	40	25	30,600	70	29	38	2	66	40	8½	240	66	14
	16	16	8½	10	38	40	26	34,000	67	30	41	2	72	40	8½	240	66	16
	20	20	9	10	40	44	29	45,488	64	33	54	2	76	40	10½	240	66	18

1899

STRAW-BURNING ENGINES.

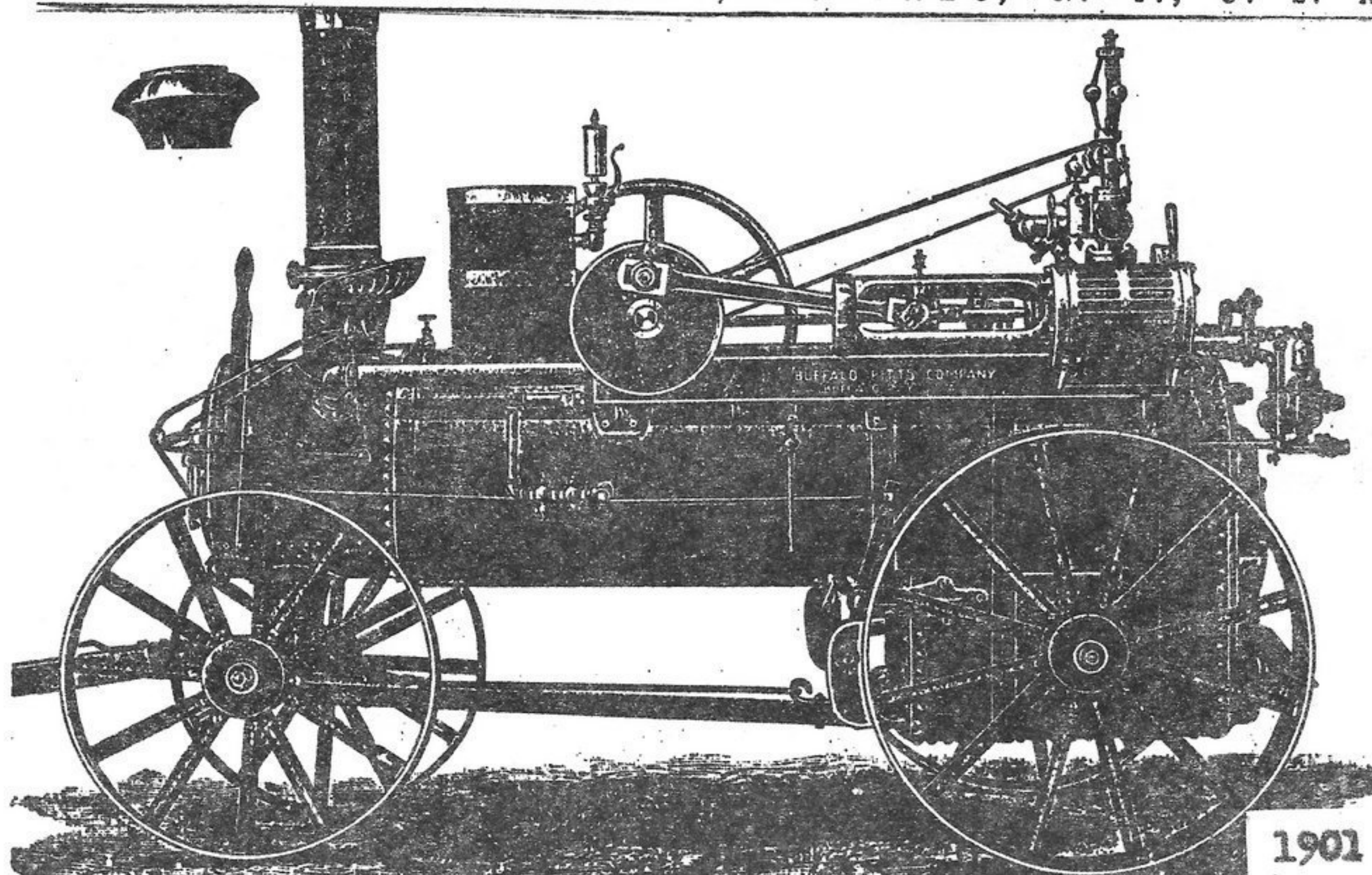
Table of Dimensions of the Buffalo Pitts Straw-burning Engines.

STYLE OF ENGINE	NO. OF ENGINE	HORSE-POWER	CYLINDER		BOILER										BAND FLY WHEEL			TRACTION WHEELS	
			Diameter in Inches	Length of Stroke in Inches	FIRE BOX				WAIST	TUBES		MAIN FLUE		Diameter in Inches	Width of Face in Inches	Revolutions per Minute	Diameter in Inches	Width of Face in Inches	
					Height in Inches	Length in Inches	Width in Inches	Cubic Inches		Number	Diameter in Inches	Length in Inches	Diameter in Inches						Length in Inches
Plain, Mounted on Iron Wheels	S. B. 16	16	8½	10	36½	38	26	36,062	33½	19	3	102	14	60	40	8½	250	..	..
	S. B. 20	20	8¾	11	37½	36	27½	37,125	36	20	3	108	15	69½	40	8½	250	..	..
Traction	S. B. 16	16	8½	10	36½	38	26	36,062	33½	19	3	102	14	60	40	8½	250	66	16
	S. B. 18	18	8½	12	37½	36	27	37,125	35½	20	3	108	15	70	44	8½	250	66	..
	S. B. 22	22	9	12	37½	40	27½	41,250	36½	20	3	114	15	71½	46	9½	250	66	..
	S. B. 25	25	9¾	12	42	44	30½	64,680	37½	23	3	114	15	69½	48	10½	250	66	..

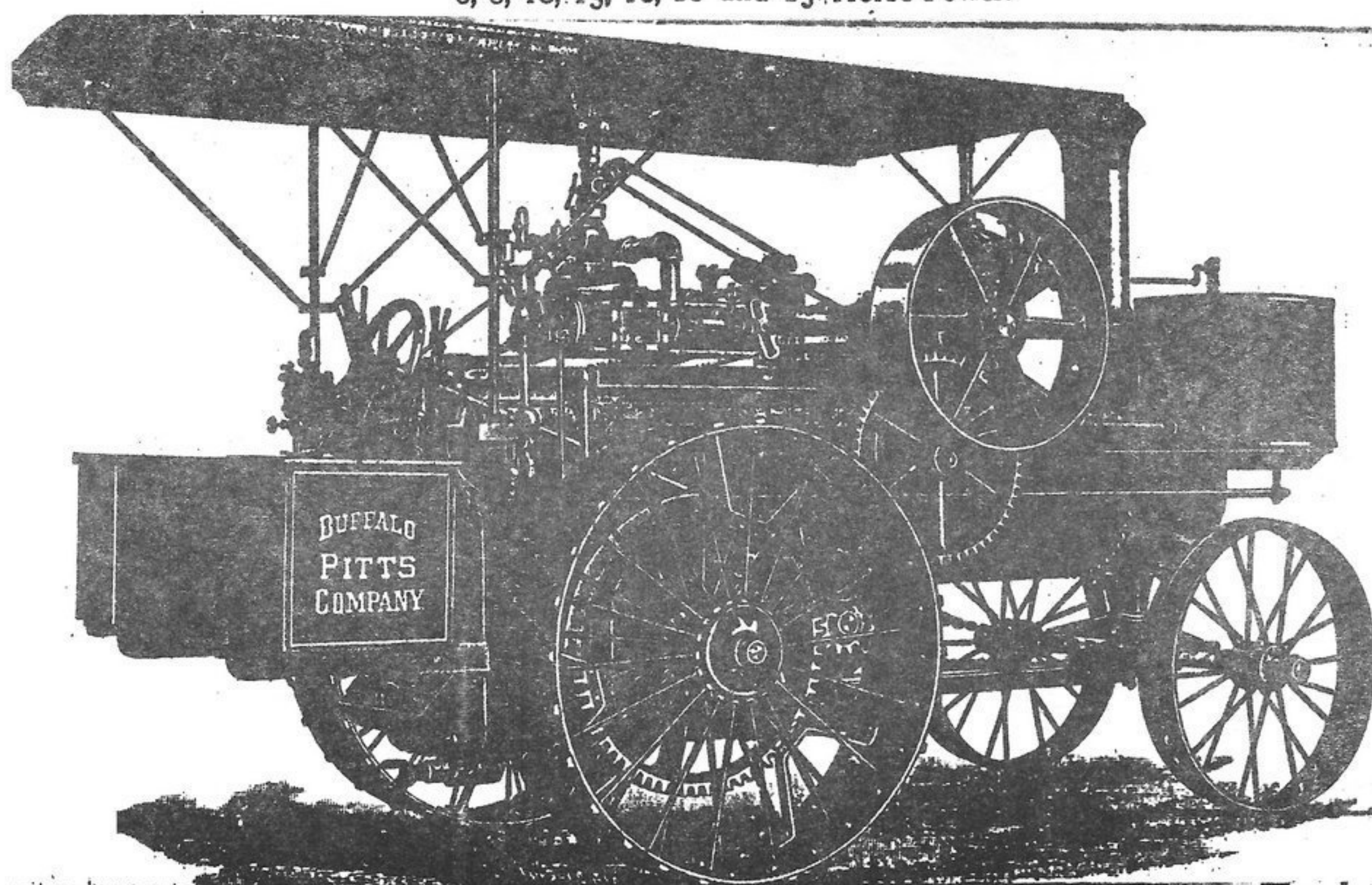


1900 Buffalo Pitts, 13, 16, 20 h.p.

BUFFALO PITTS COMPANY, BUFFALO, N. Y., U. S. A.



1901
Single-Cylinder Coal and Wood-Burning Portable Engines.
6, 8, 10, 13, 16, 20 and 25 Horse-Power.



1901
New Double-Cylinder Coal, Wood and Straw-Burning Traction Engine.
Complete with friction clutch, tank, fuel boxes, etc.

Sizes: 13, 16, 20, 25 and 30 Horse-Power.

13 Horse-Power, Mounted on Locomotive Boiler

to Burn Coal or Wood.

10

16, 20, 25 and 30 Horse-Power, Mounted on Universal Direct-Flue Boilers

to Burn Coal, Wood or Straw.

1901

BUFFALO PITTS COMPANY, BUFFALO, N. Y., U. S. A.

Sizes and Dimensions of Buffalo Pitts Engines and Boilers. 1901

Single-Cylinder Engines.—Traction.

HORSE-POWER	CYLINDER		BOILER						BAND FLY WHEEL			TRACTION WHEELS		Diameter of Crank Shaft in Inches	Diameter of Countershaft in Inches	STYLE OF BOILER	
	Diameter in Inches	Length of Stroke in Inches	FIRE BOX			WAIST	TUBES		Diameter in Inches	Width of Face in Inches	Revolutions per Minute	Diameter in Inches	Width of Face in Inches				
			Height in Inches	Length in Inches	Width in Inches		Diameter in Inches	Number									Diameter in Inches
8	6½	9	33	32	22	26	32	2	60	36	8½	270	60	10	2½	2¾	Locomotive, for Coal or Wood
10	7	10	33	32	22	26	32	2	60	36	8½	270	60	12	2¾	2¾	
13	7½	10	38	40	26	30	41	2	72	44	9½	260	66	14	2¾	2¾	
16	8½	10	38	40	26	30	41	2	72	44	9½	260	66	16	2¾	2¾	
20	8½	10	42	44	26	30	41	2	84	44	9½	260	66	16	2¾	2¾	Universal, for Coal, Wood or Straw
25	8½	12	45	44	29	33	56	2	84	46	10½	250	66	20	3½	2¾	
30	9½	12	46	46	31	36	65	2	84	46	10½	250	66	20	3½	2¾	

Portable Single-Cylinder Engines are built in 6, 8, 10, 13, 16, 20 and 25-Horse-Power.

1901

Double-Cylinder Engines.—Traction.

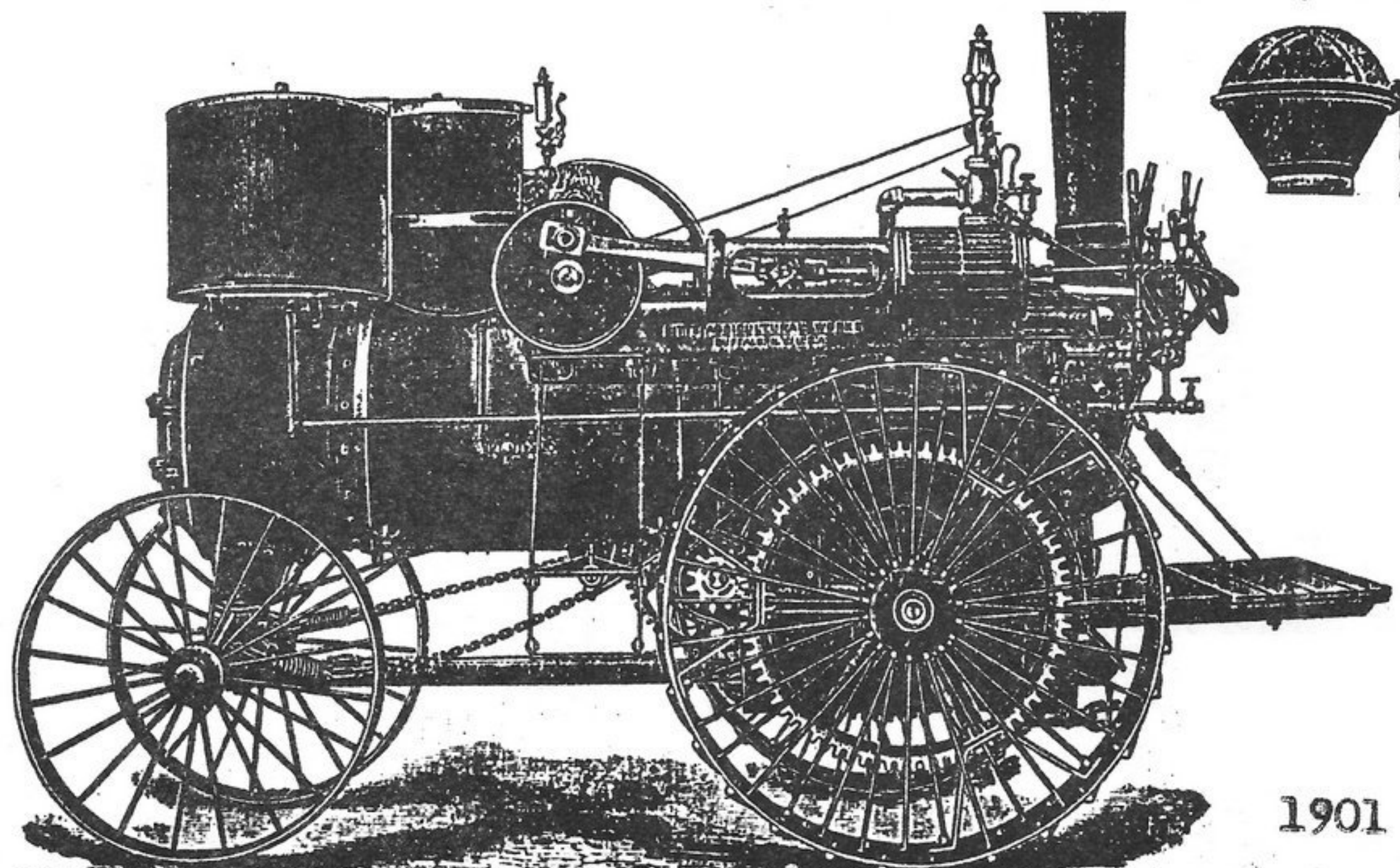
HORSE-POWER	CYLINDER		BOILER						BAND FLY WHEEL			TRACTION WHEELS		Diameter of Crank Shaft in inches	Diameter of Countershaft in inches	STYLE OF BOILER	
	Diameter in inches	Length of Stroke in inches	FIRE BOX			WAIST	TUBES		Diameter in inches	Width of Face in inches	Revolutions per Minute	Diameter in inches	Width of Face in inches				
			Height in inches	Length in inches	Width in inches		Number	Diameter in inches									Length in inches
13	6	9	38	40	26	30	41	2	72	40	8 1/4	270	66	14	2 3/4	2 3/4	Locomotive, for Coal or Wood Universal, for Coal, Wood or Straw "
16	6	10	42	44	26	30	41	2	84	44	9 1/4	260	66	16	3 1/4	2 3/4	
20	6 1/4	10	45	44	29	33	56	2	84	44	9 1/4	260	66	20	3 1/4	2 3/4	
25	7	12	46	46	31	36	65	2	84	46	10 1/4	250	66	20	3 1/4	2 3/4	
30	7 1/4	12	47	46	33	38	76	2	84	46	10 1/4	250	66	22	3 1/4	2 3/4	

Portable Double-Cylinder Engines are built in all above sizes.

1902

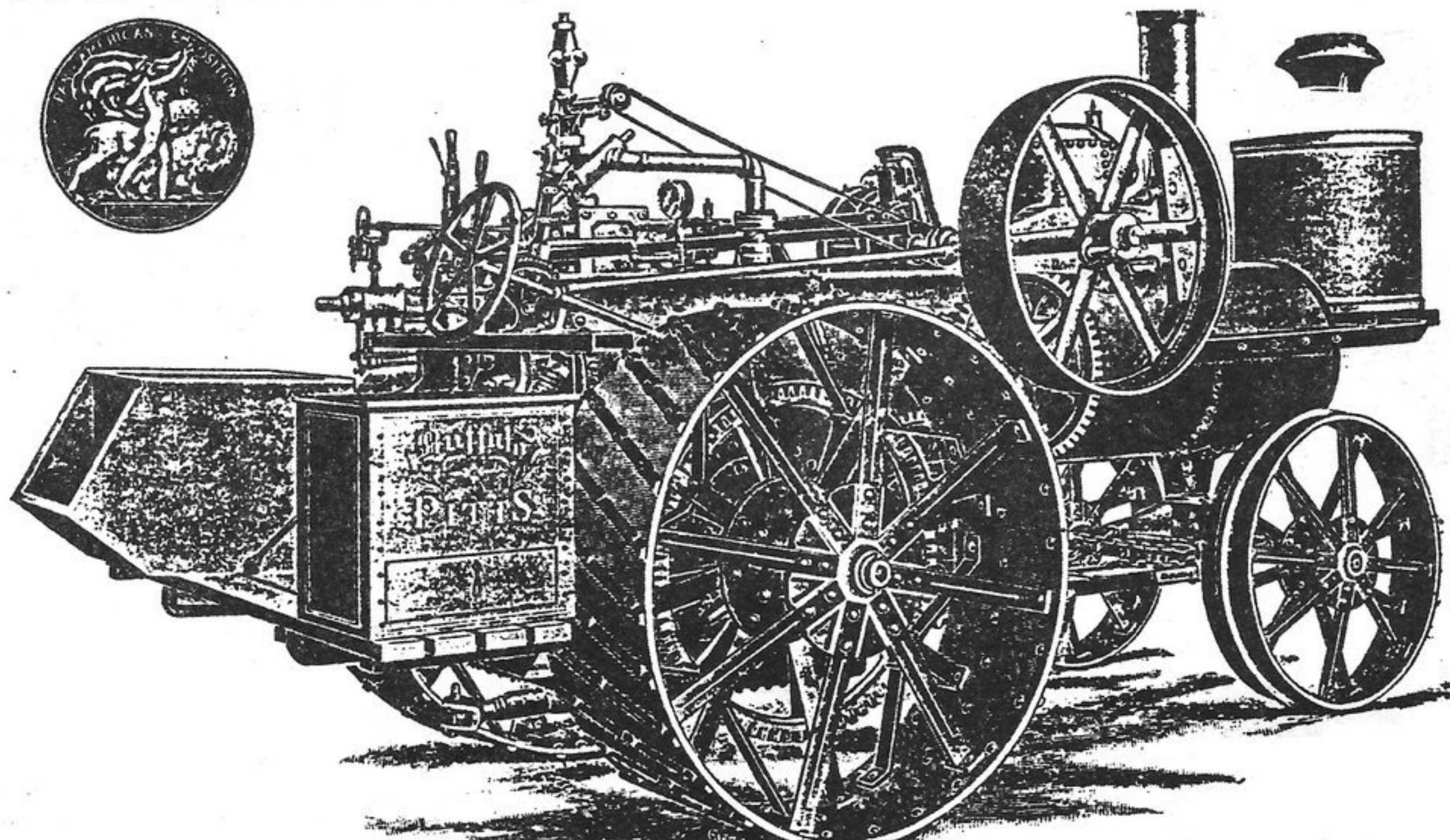
Single-Cylinder Straw-Burning Return-Flue Engines.—Traction.

HORSE-POWER	CYLINDER		BOILER						BAND FLY WHEEL			TRACTION WHEELS		Diameter of Crank Shaft in Inches	Diameter of Countershaft in Inches	
	Diameter in Inches	Length of Stroke in Inches	FIRE BOX		WAIST	TUBES		MAIN FLUE		Diameter in Inches	Width of Face in Inches	Revolutions per Minute	Diameter in Inches			Width of Face in Inches
			Height in Inches	Length in Inches		Width in Inches	Diameter in Inches	Number	Diameter in Inches							
16	8 1/4	10	36 1/4	38	26	33 1/4	19	40	9 1/4	270	66	16	2 3/4	2 3/4		
20	9 1/4	12	37 1/4	38	27	35 1/4	20	44	9 1/4	260	66	18	3 1/4	2 3/4		
25	9 1/4	12	37 1/4	40	27 1/4	36 1/4	20	44	10 1/4	260	66	20	3 1/4	2 3/4		
30	9 1/4	12	42	44	30 1/4	37 1/4	23	48	10 1/4	250	66	20	3 1/4	2 3/4		



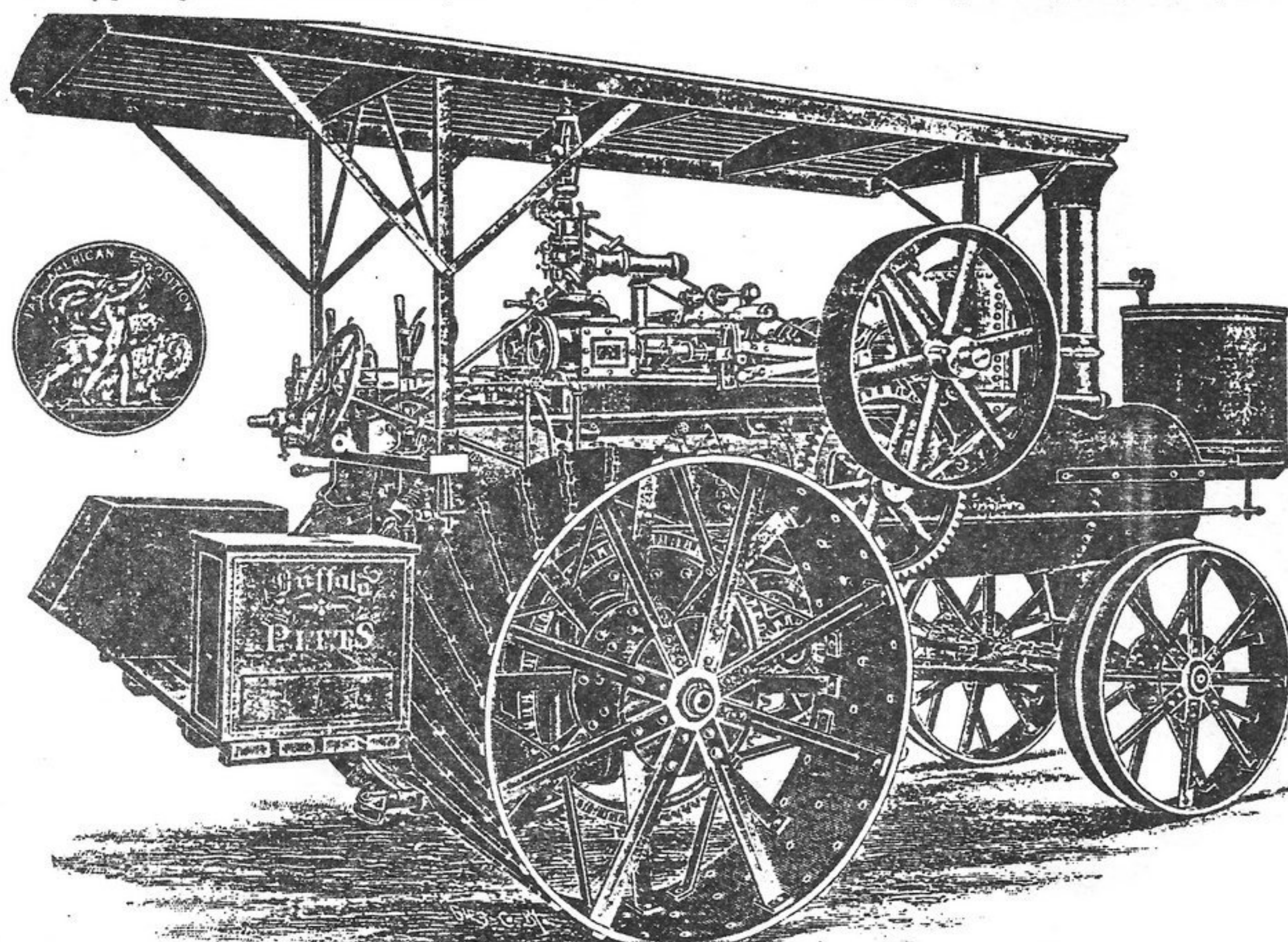
1901
Single-Cylinder Straw-Burning Return-Flue Traction Engine.
16, 18, 22 and 25 Horse-Power.

FOUR GOLD MEDALS, PAN-AMERICAN EXPOSITION

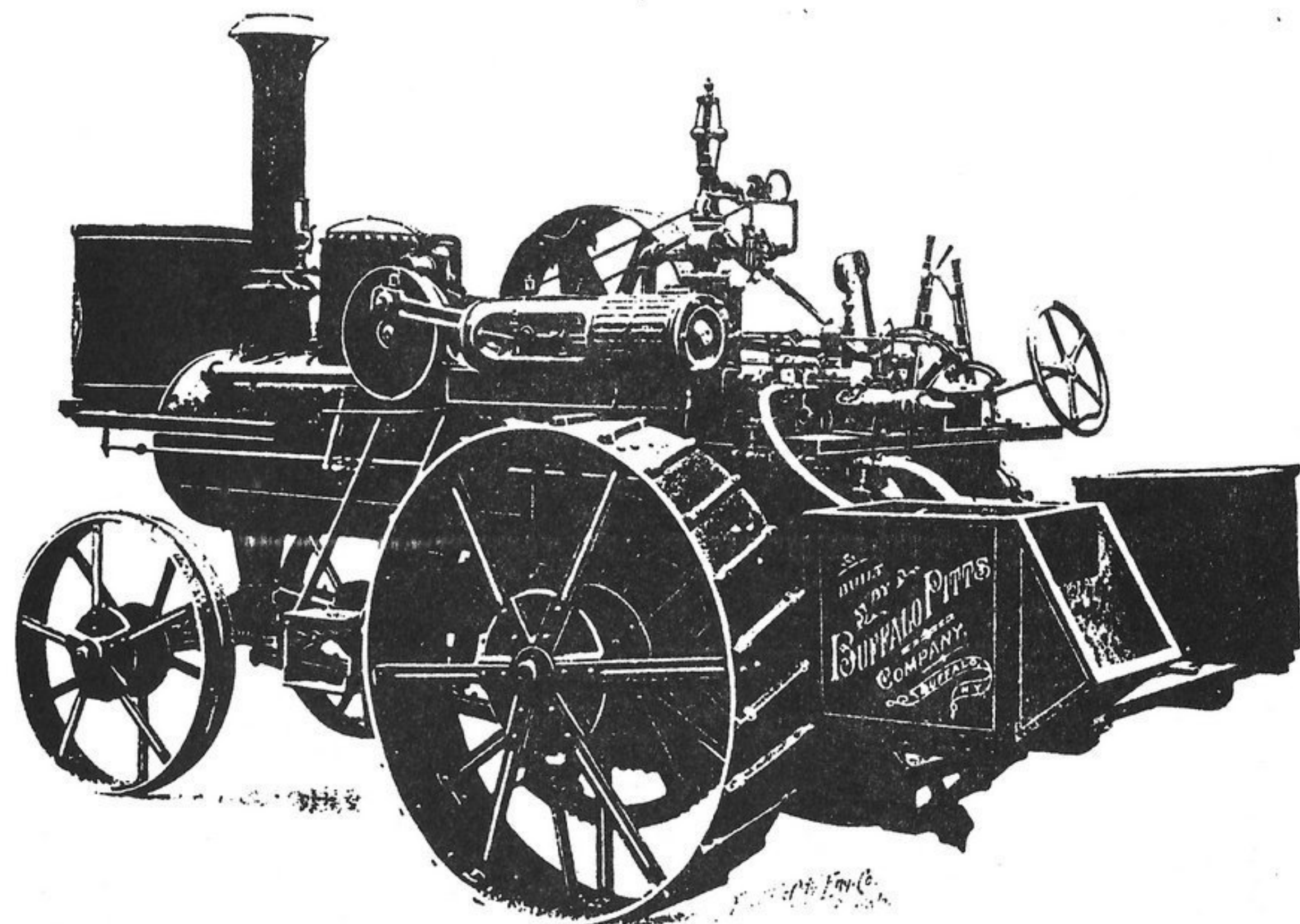


Single-Cylinder Coal, Wood and Straw-Burning Traction Engine
Illustration of 25 and 30 Horse-Power Engines
1902

(Special 32-inch rear wheels and 14-inch front wheels will be furnished, at extra price, when especially ordered)



Double-Cylinder Coal, Wood and Straw-Burning Traction Engine
Illustration of 27 and 35 Horse-Power Engines
1902

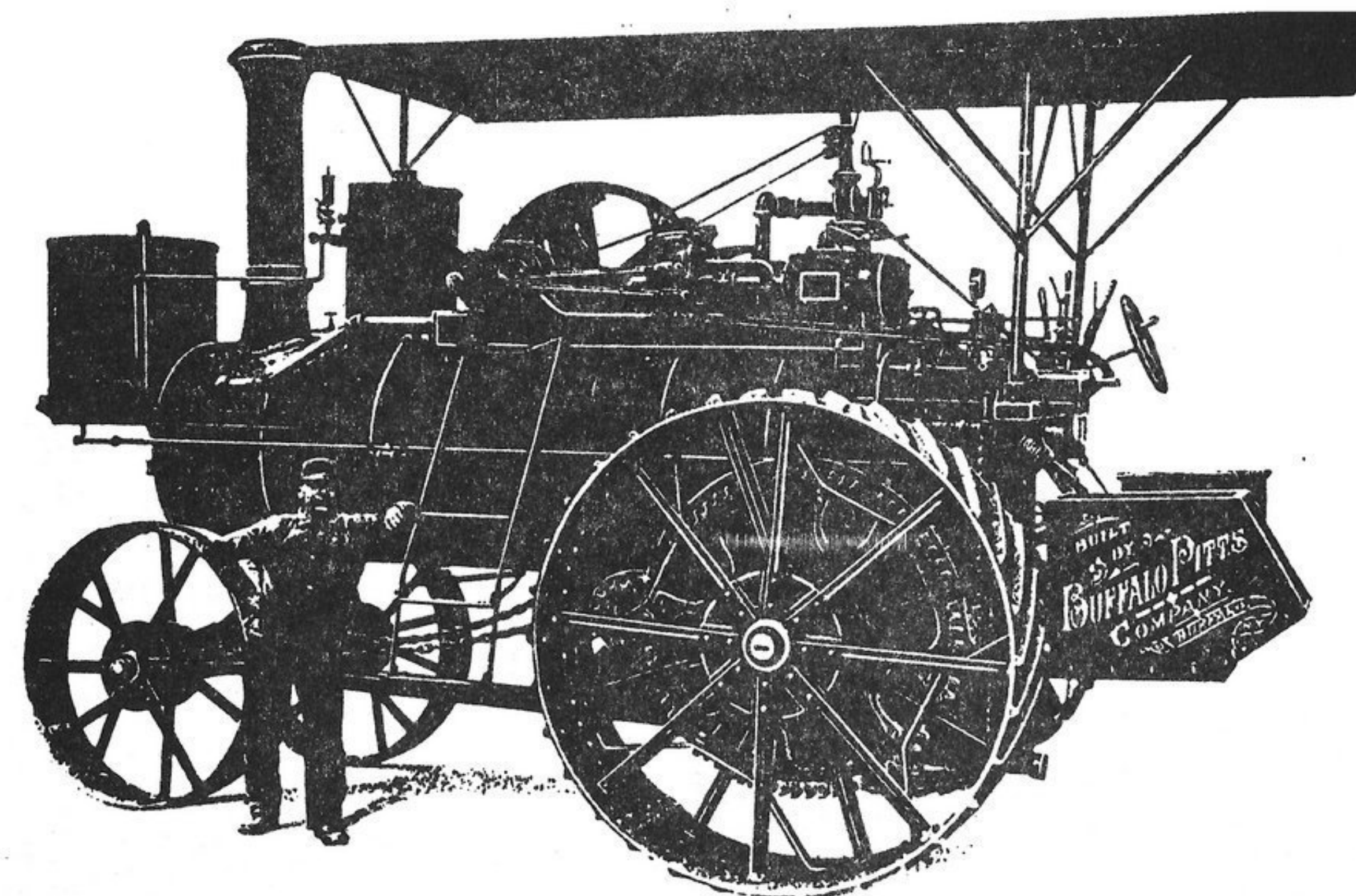


Buffalo Pitts Single-Cylinder Traction Engine, Coal, Wood or Straw-Burning
Illustration of 16 Horse-Power Engine

Made in 8, 10, 13, 16, 20, 25 and 30 Horse-Power.

(Special 32-inch rear tires and 14-inch front tires will be furnished, at extra price, when especially ordered)

1903



Buffalo Pitts Double-Cylinder Traction Engine, Coal, Wood or Straw-Burning
Illustration of 35 Horse-Power Engine

Built in 14, 18, 22, 27 and 35 Horse-Power.

(Special 32-inch rear tires and 14 inch front tires will be furnished, at an extra price, when especially ordered)

1903

1903

Sizes and Dimensions of Buffalo Pitts Engines and Boilers

SINGLE-CYLINDER ENGINES.—TRACTION

Horse-Power	CYLINDER		DIAMETER OF BOILER IN INCHES	STYLE OF BOILER	FLY WHEEL			REAR WHEELS		FRONT WHEELS	
	Diameter in Inches	Length of Stroke in Inches			Diameter in Inches	Width of Face in Inches	Revolutions per Minute	Diameter in Inches	Width of Face in Inches	Diameter in Inches	Width of Face in Inches
8	6½	9	25	Locomotive, for Coal and Wood	36	8½	270	60	10	42	5
10	7	10	26	" " " " " "	36	8½	270	60	12	42	5
13	7½	10	29	Universal, for Coal, Wood and Straw	44	9½	260	66	16	45	7
16	8½	10	30	" " " " " "	44	9½	260	66	16	45	7
20	8½	12	32	" " " " " "	46	10½	250	66	20	48	9
25	9½	12	36	" " " " " "	46	10½	250	78	24	51	12
30	10	12	38	" " " " " "	46	10½	250	78	24	51	12

Portable Engines are built in all the above sizes.

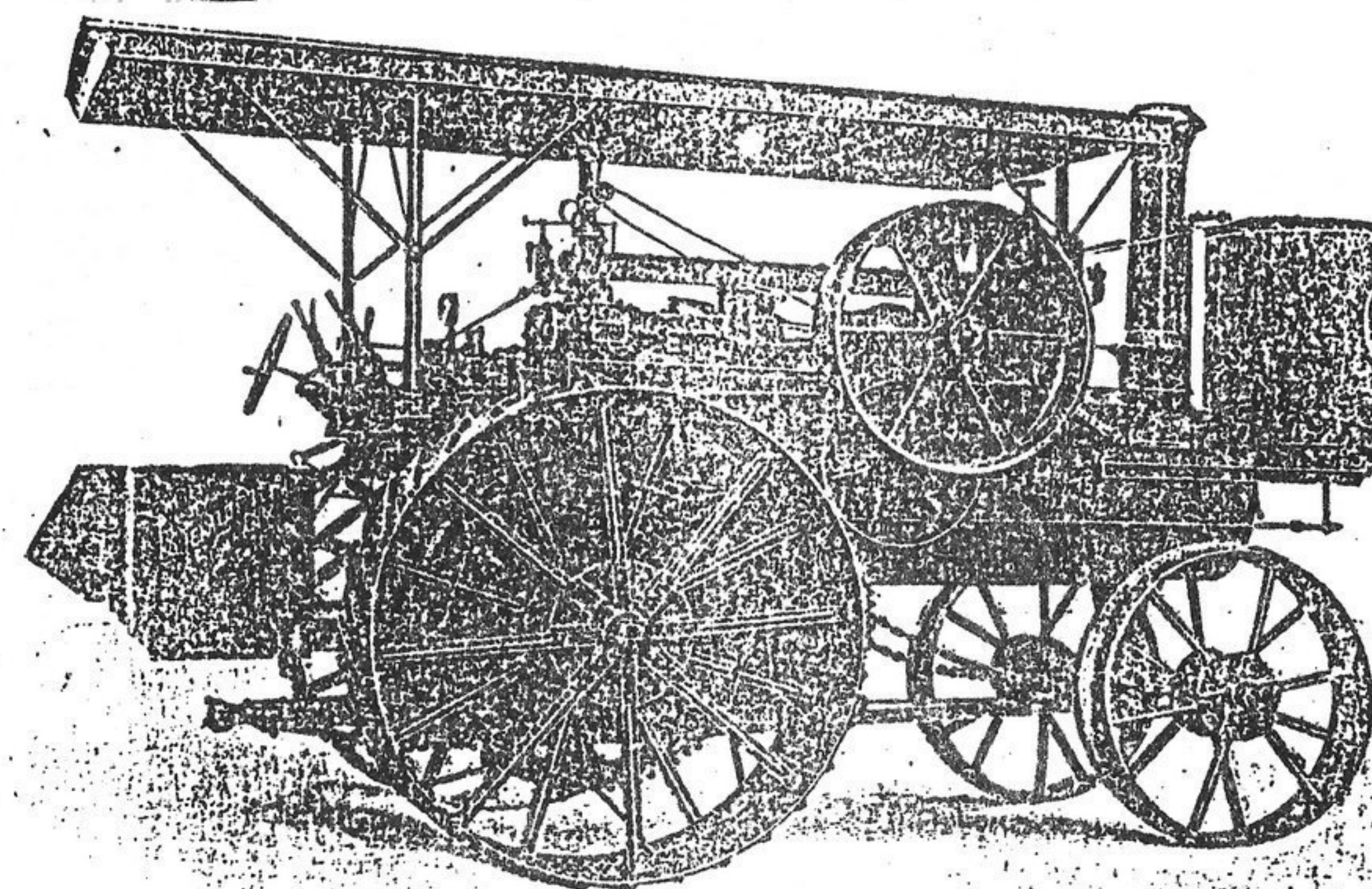
DOUBLE-CYLINDER ENGINES.—TRACTION

Horse-Power	CYLINDER		DIAMETER OF BOILER IN INCHES	STYLE OF BOILER	FLY WHEEL			REAR WHEELS		FRONT WHEELS	
	Diameter in Inches	Length of Stroke in Inches			Diameter in Inches	Width of Face in Inches	Revolutions per Minute	Diameter in Inches	Width of Face in Inches	Diameter in Inches	Width of Face in Inches
14	5½	10	30 short	Universal, for Coal, Wood and Straw	44	9½	260	66	16	45	7
18	6	10	30 ex. long	" " " " " "	44	9½	260	66	20	48	9
22	6½	10	33	" " " " " "	46	10½	250	66	20	48	9
22 Spcl	6½	10	33	" " " " " "	46	10½	250	78	24	51	12
27	7	12	38	" " " " " "	46	10½	250	78	24	51	12
35	7½	12	40	" " " " " "	46	10½	250	78	24	51	12

Portable Engines are built in all the above sizes.

SINGLE-CYLINDER STRAW-BURNING RETURN-FLUE ENGINES.—TRACTION

Horse-Power	CYLINDER		DIAMETER OF BOILER IN INCHES	HAND FLY WHEEL			TRACTION WHEELS	
	Diameter in Inches	Length of Stroke in Inches		Diameter in Inches	Width of Face in Inches	Revolutions per Minute	Diameter in Inches	Width of Face in Inches
25	9½	12	37½	48	10½	250	66	20



Buffalo Pitts Double-Cylinder Traction Engine, Coal, Wood or Straw-Burning
Illustration of 22 Horse-Power, Special

Built in 14, 18, 22, 27 and 35 Horse-Power

Special 32-inch rear tires and 14-inch front tires will be furnished, at extra price, when especially ordered. The sizes small; this have but 12 spokes in driving wheel, instead of 16, and have a different arrangement of the steam supply pipe,

1904

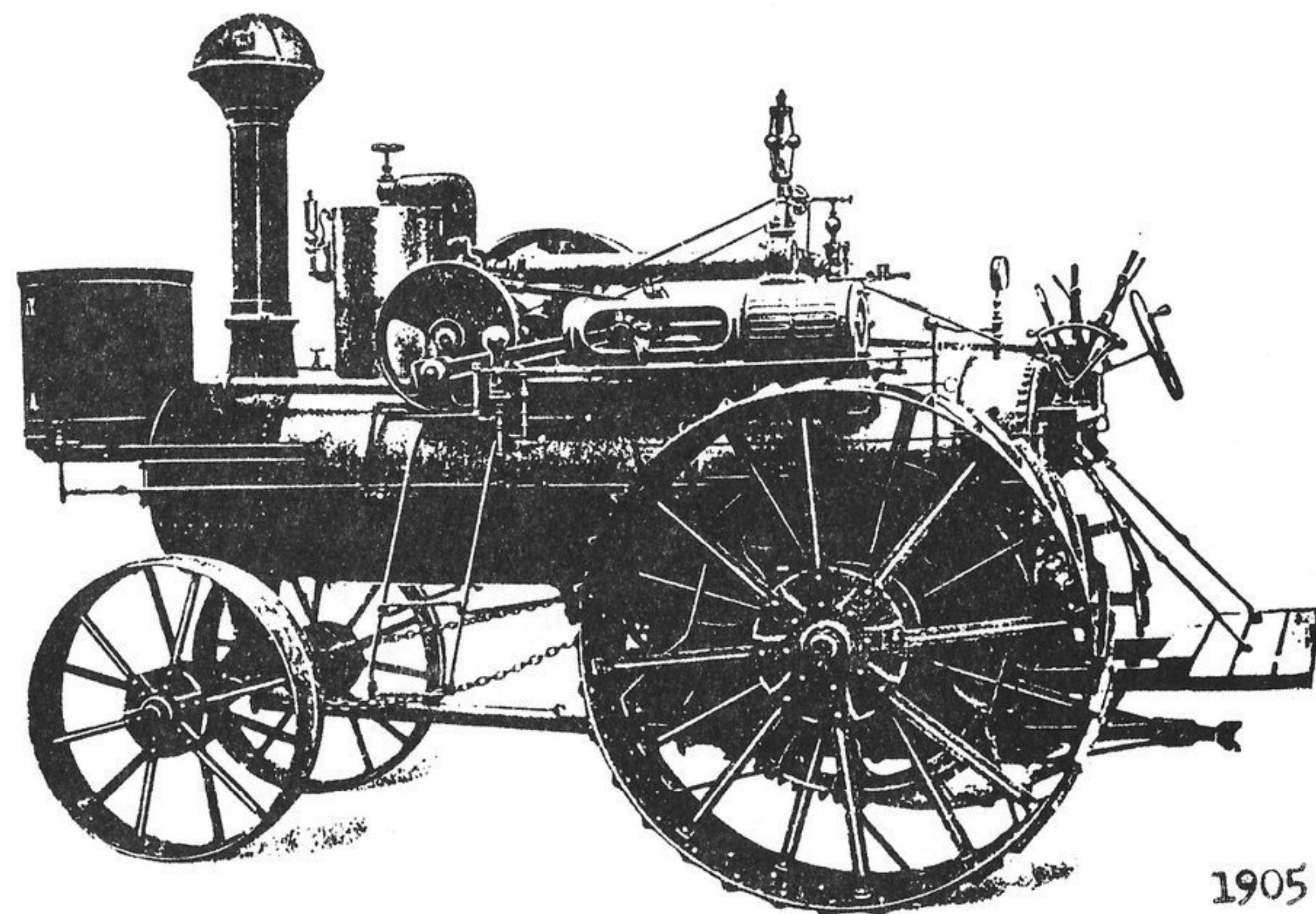
1904

Dimensions of Traction Engines

DOUBLE CYLINDER

Rated Horse-Power	14	18	23	23 Special	27	35
CYLINDERS:						
Diameter	5½ in. & 5½ in.	6 in. & 6 in.	6½ in. & 6½ in.	6½ in. & 6½ in.	7 in. & 7 in.	7½ in. & 7½ in.
Stroke	10 in. & 10 in.	10 in. & 10 in.	10 in. & 10 in.	10 in. & 10 in.	12 in. & 12 in.	12 in. & 12 in.
BOILER:						
Style of	Universal	Universal	Universal	Universal	Universal	Universal
Diameter	30 inches	30 inches	33 inches	33 inches	38 inches	40 inches
Fire box, height	42 inches	42 inches	45 inches	45 inches	47 inches	50 inches
Fire box, length	44 inches	44 inches	44 inches	44 inches	46 inches	48 inches
Fire box, width	26 inches	26 inches	29 inches	29 inches	33 inches	35 inches
Tubes, number	41	41	56	56	76	86
Tubes, diameter	2 inches	2 inches	2 inches	2 inches	2 inches	2 inches
Tubes, length	72 inches	84 inches	84 inches	84 inches	84 inches	84 inches
Grate area, square feet	7.94	7.94	8.86	8.86	10.54	11.66
Heating surface, square feet	166	188	242	242	328	371
Steam pressure, lbs. per square inch	135	135	135	135	135	135
WHEELS:						
Diameter	44 inches	44 inches	46 inches	46 inches	46 inches	46 inches
Face	9½ inches	9½ inches	10½ inches	10½ inches	10½ inches	10½ inches
Revolutions per minute	260	260	250	250	250	250
Approximate miles per hour engine travels at above revolutions per minute	3	3	3	3	3	3
RAIL WHEELS:						
Diameter	66 inches	66 inches	66 inches	78 inches	78 inches	78 inches
Face	16 inches	20 inches	20 inches	24 inches	24 inches	24 inches
Wider tires supplied, to order, at extra price						
FRONT WHEELS:						
Diameter	45 inches	48 inches	48 inches	51 inches	51 inches	51 inches
Face	7 inches	9 inches	9 inches	12 inches	12 inches	12 inches
Distances between axles	8 ft. 6 in.	9 ft. 6 in.	9 ft. 6 in.	9 ft. 10 in.	10 ft. 4 in.	10 ft. 4 in.
Stroke width of engine	6 ft. 9½ in.	7 ft. 5½ in.	7 ft. 9 in.	8 ft. 5 in.	8 ft. 10 in.	9 feet
Weight, lbs., boxed for ocean shipment	17,600	18,000	20,000	24,500	25,100	26,000
Weight, lbs., boxed for ocean shipment	660	700	820	920	980	1040

Portable Engines are built in all the above sizes.



1905

Buffalo Pitts Single-Cylinder Traction Engine, Coal, Wood or Straw-Burning
Illustration of 25 Horse-Power Engine, Straw-Burning

Made in 20, 25 and 30 Horse-Power.

Special 32-inch rear tires and 11-inch front tires will be furnished at extra price, when especially ordered. Wood or coal-burning engines are boxed on the rear platform.

Buffalo Pitts Single-Cylinder Traction Engines.

1904

TELEGRAPH WORD.	Coal or Wood Burning.	PRICE.
Tenement	8 Horse-Power, Cylinder 6½ x 9, Boiler 25 inches	\$1235
Tenfold	" " " 7 x 10, " 26 "	1325
Tennis	" " " 7½ x 10, " 29 "	1485
Tenora	" " " 8½ x 10, " 30 "	1650
Tenterhook	" " " 8½ x 12, " 32 "	1860
Tentful	" " " 9½ x 12, " 36 "	2125
Tetraphim	" " " 10 x 12, " 38 "	2400

Straw Burning.

Tenility	13 Horse-Power, Cylinder 7½ x 10, Boiler 29 inches	\$1560
Tenfold	" " " 8½ x 10, " 30 "	1725
Tentory	" " " 8½ x 12, " 32 "	1935
Tenrity	" " " 9½ x 12, " 36 "	2200
Tetraphim	" " " 10 x 12, " 38 "	2475

Buffalo Pitts Return-Flue Traction Straw Burner.

Tentale	25 H. P., Cylinder 9½ x 12, Boiler 37½ in. waist	\$2225.
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Buffalo Pitts Single-Cylinder Portable Engines.

Tedatrix	8 Horse-Power, Cylinder 6½ x 9, Boiler 25 inches	\$ 600
Tidern	" " " 7 x 10, " 26 "	660
Tidator	" " " 7½ x 10, " 29 "	900
Tidiron	" " " 8½ x 10, " 30 "	960
Tidicular	" " " 8½ x 12, " 32 "	1050
Tidifeth	" " " 9½ x 12, " 36 "	1200
Tidifying	" " " 10 x 12, " 38 "	1250

Buffalo Pitts Double-Cylinder Portable Engines.

Tedify	14 H. P., Cylinders { 5½ x 10 } , Boiler 30 in., short	\$1050
Tedimony	" " " { 6 x 10 } , " 30 " extra long	1100
Tediness	" " " { 6½ x 10 } , " 33 "	1200
Tedone	" " " { 7 x 12 } , " 38 "	1300
Tediment	" " " { 7½ x 12 } , " 40 "	1500

Portable Engines Furnished with Injector Only.
Steam Pump, extra \$35

Buffalo Pitts Double-Cylinder Traction Engines.

1904

TELEGRAPH WORD.	Coal or Wood Burning.	PRICE.
Thobans	14 H. P., Cylinders { 5½ x 10 } , Boiler 30 in., short	\$1185
Themas	" " " { 6 x 10 } , " 30 " extra long	20
Theocratic	" " " { 6½ x 10 } , " 33 "	22
Thermidor	" " Special, Cyl. { 6½ x 10 } , " 33 "	24
(With 78-in. Wheels, 24-in. Tires, Heavy Gear, etc.—see catalogue)		
Thermosol	27 H. P., Cylinders { 7 x 12 } , Boiler 38 in.	264
Therurgy	" " " { 7½ x 12 } , " 40 "	294

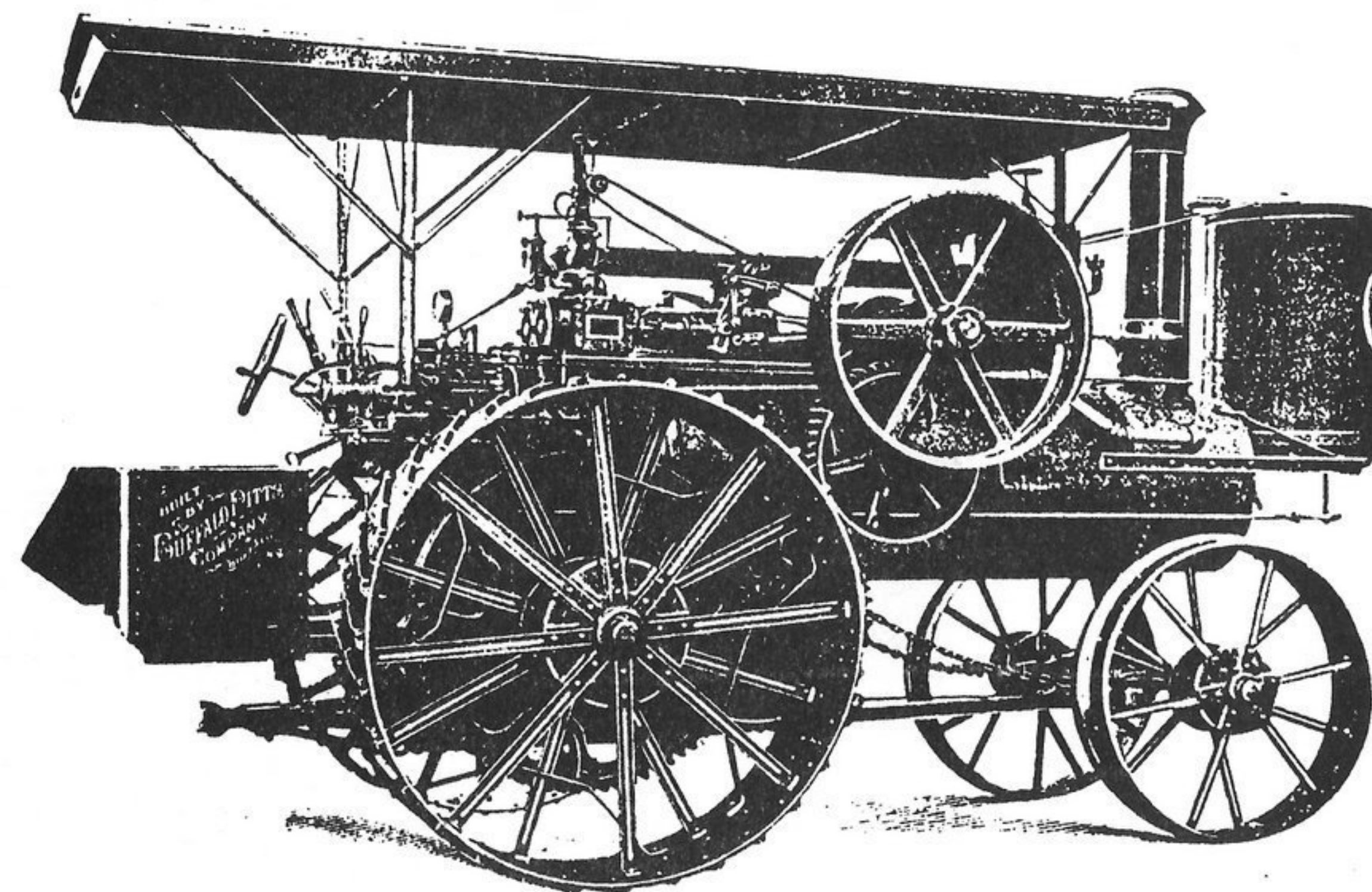
Straw Burning.

Tholus	14 H. P., Cylinders { 5½ x 10 } , Boiler 30 in., short	\$1185
Thraldom	" " " { 6 x 10 } , " 30 " extra long	216
Thrones	" " " { 6½ x 10 } , " 33 "	230
Thrus	" " Special, Cyl. { 6½ x 10 } , " 33 "	252
(With 78 in. Wheels, 24-in. Tires, Heavy Gear, etc.—see catalogue.)		
Thumbkin	27 H. P., Cylinders { 7 x 12 } , Boiler 38 in.	267
Thumper	" " " { 7½ x 12 } , " 40 "	297

Extras.

Telchiness	Special Stiff Platform and Drawbar for Engines for Hauling, Plowing, etc.	\$35
Telanoid	Inches extra width of tires on Traction Wheels. For each 2 inches add	2
Telanus	Jacketing Boiler	6
Telaug	Kip Force-Feed Lubricator, in place of Detroit Sight-Feed, extra	1
Telchy	Water and Fuel Tank on Trucks, 14 barrels	7
Tethered	Tank alone	3
Thankful	Double-Acting Force Pump with Suction and Discharge Hose	34
Theatre	Ejector and Fittings without Hose	14
Theism	Cab for Engine	44

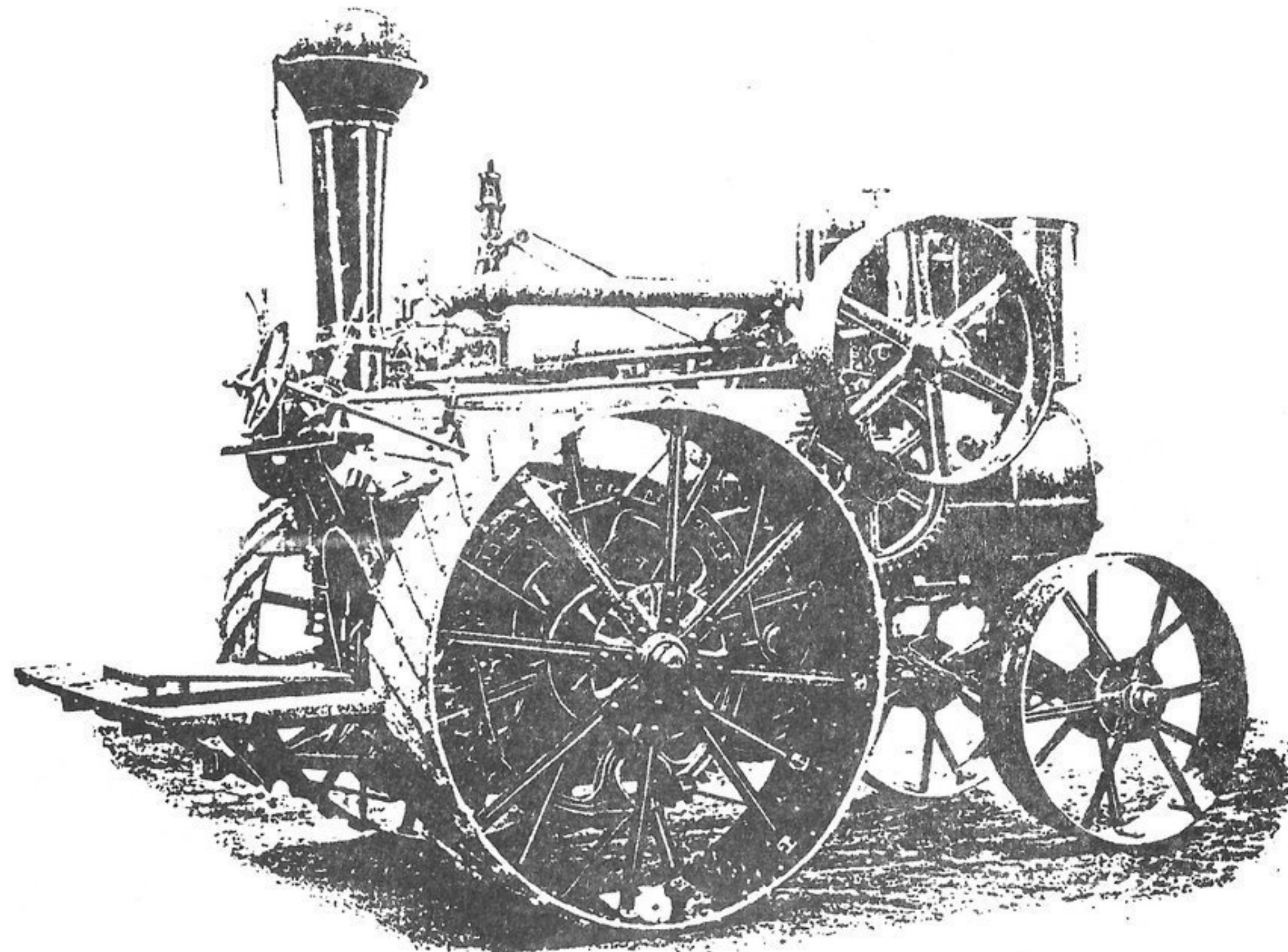
Tongue, Neckyoke and Whiffletrees, when furnished with Traction Engine 16
Hose for Pumps, Manufacturer's List.



1905

Buffalo Pitts Double-Cylinder Traction Engine, Coal, Wood or Straw-Burning
Illustration of 22 Horse-Power, Special

These "Special" Double-Cylinder Engines are built in 22, 27 and 35 horse-power sizes, for hauling and plowing as well as threshing. They are furnished with, extra face steel gearing. The compensating gear is large and is fitted with eight steel bevel pinions. We use a special 5-inch steel countershaft, supported in bearings of a design, which form a tie between the thrust shaft and shell of the boiler. For this class of engine we make a special platform and drawbar.



Buffalo Pitts Straw-Burning Return-Flue Traction Engine
25 Horse-Power Single-Cylinder Engine, on 37 1/2-inch Return Flue Boiler

1905

DIMENSIONS: Cylinder, 10 x 12 in.; fire box, 36 in. high, 44 in. long, 30 in. wide at grate line; 21 tubes, 10 ft. 6 in. long, 3 in. diameter; grate area, 9.100 sq. ft.; heating surface, 242 sq. ft.; steam pressure, 140 lbs. per sq. in. Fly wheel, 40 in. diameter, 10 1/2 in. face, 250 revolutions per minute; rear wheel, 78 in. diameter, 24 in. face; front wheels, 51 in. diameter, 12 in. face. Distance between axles, 9 ft. 8 in.; extreme width of engine, 8 ft. 9 1/2 in.

1905

Dimensions of Traction Engines

DOUBLE CYLINDER

RATED HORSE-POWER	14	18	22	22 Special	27	35
CYLINDERS:						
Diameter	6 in. & 6 in.	6 1/2 in. & 6 1/2 in.	7 in. & 7 in.	7 in. & 7 in.	7 1/2 in. & 7 1/2 in.	8 1/2 in. & 8 1/2 in.
Stroke	10 in. & 10 in.	10 in. & 10 in.	10 in. & 10 in.	10 in. & 10 in.	12 in. & 12 in.	12 in. & 12 in.
BOILER:						
Style of	Locomotive	Locomotive	Universal	Universal	Universal	Universal
Diameter	30 inches	30 inches	33 inches	33 inches	38 inches	40 inches
Fire box, height	42 inches	42 inches	45 inches	45 inches	47 inches	50 inches
Fire box, length	44 inches	44 inches	44 inches	44 inches	46 inches	48 inches
Fire box, width	26 inches	26 inches	29 inches	29 inches	33 inches	35 inches
Tubes, number	39	39	52	52	67	78
Tubes, diameter	2 inches	2 inches	2 inches	2 inches	2 inches	2 inches
Tubes, length	72 inches	84 inches	84 inches	84 inches	84 inches	84 inches
Grate area, square feet	7.94	7.94	8.86	8.86	10.54	11.66
Heating surface, square feet	166	183	242	242	328	371
Steam pressure, lbs. per square inch	140	140	140	140	140	140
FLY WHEEL:						
Diameter	44 inches	44 inches	46 inches	46 inches	46 inches	46 inches
Face	9 1/2 inches	9 1/2 inches	10 1/2 inches	10 1/2 inches	10 1/2 inches	10 1/2 inches
Revolutions per minute	260	260	250	250	250	250
Approximate miles per hour engine travels at above revolutions per minute	3	3	3	3	3	3
REAR WHEELS:						
Diameter	66 inches	66 inches	66 inches	78 inches	78 inches	78 inches
Face	16 inches	20 inches	20 inches	24 inches	24 inches	24 inches
Wider tires supplied, to order, at extra price						
FRONT WHEELS:						
Diameter	45 inches	48 inches	48 inches	51 inches	51 inches	51 inches
Face	7 inches	9 inches	9 inches	12 inches	14 inches	14 inches
Distance between axles	8 ft. 6 in.	9 ft. 6 in.	9 ft. 6 in.	9 ft. 10 in.	10 ft. 4 in.	10 ft. 4 in.
Extreme width of engine	6 ft. 9 1/2 in.	7 ft. 5 1/2 in.	7 ft. 9 in.	8 ft. 5 in.	8 ft. 10 in.	9 feet

Portable Engines are built in all the above sizes.

SPECIAL NOTICE! We reserve the right to vary from the above specifications without notice.

1905

Dimensions of Traction Engines

SINGLE CYLINDER

RATED HORSE-POWER	8	10	15	18	20	25	30
CYLINDER:							
Diameter	6 1/2 inches	7 inches	8 1/2 inches	8 1/2 inches	9 1/2 inches	10 inches	11 1/4 inches
Stroke	9 inches	10 inches	10 inches	12 inches	12 inches	12 inches	12 inches
BOILER:							
Style of	Locomotive	Locomotive	Locomotive	Locomotive	Universal	Universal	Universal
Diameter	25 inches	26 inches	30 inches (short)	30 inches (long)	32 inches	36 inches	38 inches
Fire box, height	33 inches	33 inches	42 inches	42 inches	45 inches	46 inches	47 inches
Fire box, length	31 inches	32 inches	44 inches	44 inches	44 inches	46 inches	46 inches
Fire box, width	22 inches	22 inches	26 inches	26 inches	29 inches	31 inches	33 inches
Tubes, number	32	32	39	39	52	54	67
Tubes, diameter	2 inches	2 inches	2 inches	2 inches	2 inches	2 inches	2 inches
Tubes, length	60 inches	60 inches	72 inches	84 inches	84 inches	84 inches	84 inches
Grate area, square feet	4.88	4.88	7.94	7.94	8.86	9.74	10.54
Heating surface, square feet	106	106	150	170	242	285	328
Steam pressure, lbs. per square inch	140	140	140	140	140	140	140
FLY WHEEL:							
Diameter	36 inches	36 inches	44 inches	44 inches	46 inches	46 inches	46 inches
Face	8 1/2 inches	8 1/2 inches	9 1/2 inches	9 1/2 inches	10 1/2 inches	10 1/2 inches	10 1/2 inches
Revolutions per minute	270	270	260	260	250	250	250
Approximate miles per hour engine travels at above revs. per minute	3	3	3	3	3	3	3
REAR WHEELS:							
Diameter	60 inches	60 inches	66 inches	66 inches	66 inches	78 inches	78 inches
Face	10 inches	12 inches	16 inches	20 inches	20 inches	24 inches	24 inches
Wider tires supplied, to order, at extra price							
FRONT WHEELS:							
Diameter	42 inches	42 inches	45 inches	48 inches	48 inches	51 inches	51 inches
Face	5 inches	5 inches	7 inches	9 inches	9 inches	12 inches	14 inches
Distance between axles	7 feet 2 inches	7 feet 2 inches	8 feet 6 inches	9 feet 6 inches	9 ft. 6 in.	10 ft. 4 in.	10 ft. 4 in.
Extreme width of engine	5 feet 6 inches	5 feet 10 inches	6 feet 9 1/2 inches	7 feet 5 1/2 inches	7 ft. 9 in.	8 ft. 7 1/2 in.	8 ft. 10 in.

Portable Engines are built in all the above sizes.

SPECIAL NOTICE! We reserve the right to vary from the above specifications without notice.

Buffalo Pitts Single-Cylinder Traction Engines.

1905

Coal or Wood Burning.

TELEGRAPH WORD.	8 Horse-Power, Cylinder 6 1/2 x 9, Boiler 25 inches.	PRICE
Tenement	10 " " " 7 x 10, " 23 " (short).	1325
Tenfold	13 " " " 8 1/2 x 10, " 30 " (short).	1600
Tenree	15 " " " 8 1/2 x 12, " 30 " (long).	1750
Tentacula	20 " " " 9 1/2 x 12, " 32 " (short).	1800
Tenterhook	25 " " " 10 x 12, " 36 " (short).	2125
Tentful	28 " " " 11 1/4 x 12, " 38 " (short).	2500
Tetraphin	30 " " " 11 1/4 x 12, " 38 " (short).	2500

Straw Burning—Universal Boiler.

Tentory	20 Horse-Power, Cylinder 6 1/2 x 12, Boiler 33 inches.	1900
Tentivity	23 " " " 10 x 12, " 36 " (short).	2225
Terebinth	30 " " " 11 1/4 x 12, " 38 " (short).	2500

Including Jacketing Boiler.

Buffalo Pitts Return-Flue Traction Straw Burner.

Tetate	25 H. P., Cylinder 10 x 12, Boiler 37 1/2 in. waist.	2225
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Including Jacketing Boiler.

Buffalo Pitts Single-Cylinder Portable Engines.

Tetatrix	8 Horse-Power, Cylinder 6 1/2 x 6, Boiler 25 inches.	600
Tetern	10 " " " 7 x 10, " 23 " (short).	650
Tetucen	15 " " " 8 1/2 x 10, " 30 " (short).	950
Tetamur	18 " " " 8 1/2 x 12, " 30 " (long).	1000
Tetistular	20 " " " 9 1/2 x 12, " 32 " (short).	1050
Tetisteth	25 " " " 10 x 12, " 36 " (short).	1200
Tetistifying	30 " " " 11 1/4 x 12, " 38 " (short).	1250

Buffalo Pitts Double-Cylinder Portable Engines.

Tetify	14 H. P., Cylinders 6 x 10, Boiler 30 in., (short).	1030
Tetimony	18 " " " 6 1/2 x 10, " 30 " (long).	1100
Tetiness	22 " " " 7 x 10, " 36 " (long).	1200
Tetence	27 " " " 7 1/2 x 12, " 38 " (long).	1300
Tetudinal	30 " " " 8 1/2 x 12, " 40 " (long).	1300

Portable Engines Furnished with Injector only.

Steam Pump, extra. 285

Buffalo Pitts Double-Cylinder Traction Engines.

Coal or Wood Burning.

TELEGRAPH WORD.	14 H. P., Cylinders 6 x 10, Boiler 30 in., (short).	PRICE
Thabane	18 " " " 6 1/2 x 10, " 30 " (long).	2025
Thames	22 " " " 7 x 10, " 36 " (short).	2225
Theocrute	25 " " " 7 x 10, " 36 " (long).	2350
Thermidor	28 " " " 7 1/2 x 12, " 38 " (short).	2500
Thermosist	30 " " " 8 1/2 x 12, " 40 " (short).	2600
Theurgy	35 " " " 8 1/2 x 12, " 40 " (long).	2900

Straw Burning—Universal Boiler.

Thrones	22 H. P., Cylinders 7 x 10, Boiler 33 in.	2200
Thrumes	25 " " " 7 1/2 x 10, " 36 " (short).	2525
Thumblin	27 " " " 7 1/2 x 12, " 38 " (short).	2675
Thumper	35 " " " 8 1/2 x 12, " 40 " (short).	2875

Extras.

Tetular	Patent Folding Feed Tables.	10
Tetichines	Special Stiff Platform and Drawbar for Engines for Hauling, Plowing, etc.	75
Tetragus	Extra 300 gallon tank for front of Hauling and Plowing Engines.	25
Tetanoid	 inches extra width of tires on Traction Wheels. For each 2 inches add.	25
Tetanus	Jacketing Boiler.	50
Tetung	Hart Force-Feed Lubricator in place of Swift Sight-Feed, Extra.	15
Tetys	Water and Fuel Tank on Trucks (Steel).	100
Tetrad	Tank alone (Steel).	60
Tetchy	Water and Fuel Tank on Trucks (Wood).	75
Tetthered	Tank alone (Wood).	55
Thankful	Double-Acting Force Pump with Suction and Discharge Hose.	20
Theatre	Ejector and Fittings without Hose.	10
Theism	Car for Engine.	40
Tongue	Neckpoke and Whiffletrees, when furnished with Traction Engine.	10
Tonails	Head Light with large Lens.	12
Toothnet	Lifting Jacks.	10
Topcloth	Canvas Covers 18 x 36.	20
Topdress	" " 18 x 24.	12

ENGINES.

1905 BUFFALO PITTS STRAW-BURNING TRACTION ENGINES.

TELEGRAPH WORD	SINGLE CYLINDER.	PRICE
Tendrite	15 Horse-Power	\$1785
Tenebross	18 "	1950
Tentory	20 "	2085
Tenuity	25 "	2370
Terebinth	30 "	2665
Testate	25 " Return Flue	2370

DOUBLE CYLINDER.

Tholus	14 Horse-Power	\$2020
Thraldom	18 "	2260
Thrones	22 "	2475
Thruns	22 " Special	2720
(With 78-in. Wheels, 24-in. Tires, Heavy Gears, etc. See catalogue.)		
Thumbkin	27 Horse-Power	2880
Thumper	35 "	3200

BUFFALO PITTS COAL OR WOOD-BURNING TRACTION ENGINES.

SINGLE CYLINDER.

Tenement	8 Horse-Power	\$1320
Tenfold	10 "	1430
Tenreo	15 "	1700
Tentacula	18 "	1875
Tenterhook	20 "	2005
Tentful	25 "	2290
Teraphim	30 "	2585

DOUBLE CYLINDER.

Thebans	14 Horse-Power	\$1940
Themes	18 "	2180
Theocratic	22 "	2400
Thermidor	22 " Special	2640
(With 78-in. Wheels, 24-in. Tires, Heavy Gears, etc. See catalogue.)		
Thermostat	27 Horse-Power	2900
Theurgy	35 "	3125

Tongue, Neck yoke and Whiffletrees, when furnished with Traction Engine. \$10

SPECIAL—33-inch tire rear wheels and 14-inch front wheels furnished with 25-Horse Engines and larger at \$100 extra.

EXTRAS.

Tetchires	Special Stiff Platform and Draw Bar for Hauling, Flowing, etc.	\$ 75
Tetragon	Extra size 300 Gallon Tank for Front of Hauling and Flowing Engines.	35
Tetanus	Jacketing Boilers on Coal-Burning Engines	50
Tethys	Water and Fuel Tank on Trucks (Steel).	100
Tetrad	Tank alone (Steel)	60
Tetchy	Water and Fuel Tank on Trucks (Wood).	75
Tethered	Tank alone (Wood)	35
Thankful	Tank Pump with Suction and Discharge Hose	25
Thaism	Cab for Engine	40
Tonsils	Headlight with large Lens	12

THRESHERS.

BUFFALO PITTS NIAGARA JUNIOR THRESHERS.

Tabletalk	28 x 48 Separator, without Stacker or Carrier	\$465
Tableshore	33 x 54 Separator, without Stacker or Carrier	500

BUFFALO PITTS NIAGARA THRESHERS.

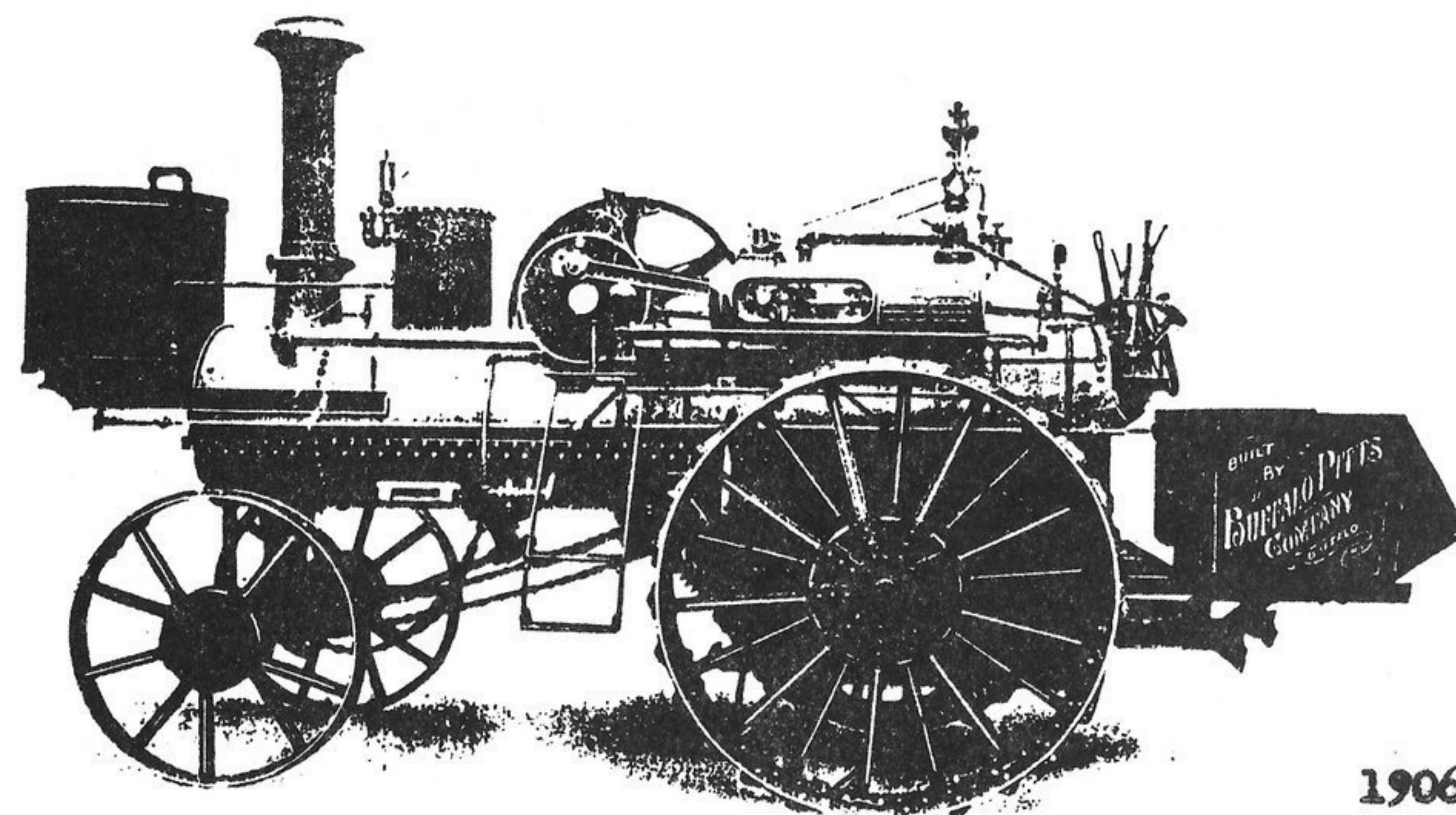
Tableture	36 x 60 Separator, without Stacker or Carrier	\$600
Tablecloth	40 x 64 Separator, without Stacker or Carrier	645

BUFFALO PITTS NIAGARA SECOND THRESHERS.

Tale	28 x 48 Separator, without Stacker or Carrier	\$470
Talcite	32 x 54 Separator, without Stacker or Carrier	505
Talcous	36 x 60 Separator, without Stacker or Carrier	600
Talclate	41 x 66 Separator, without Stacker or Carrier	655

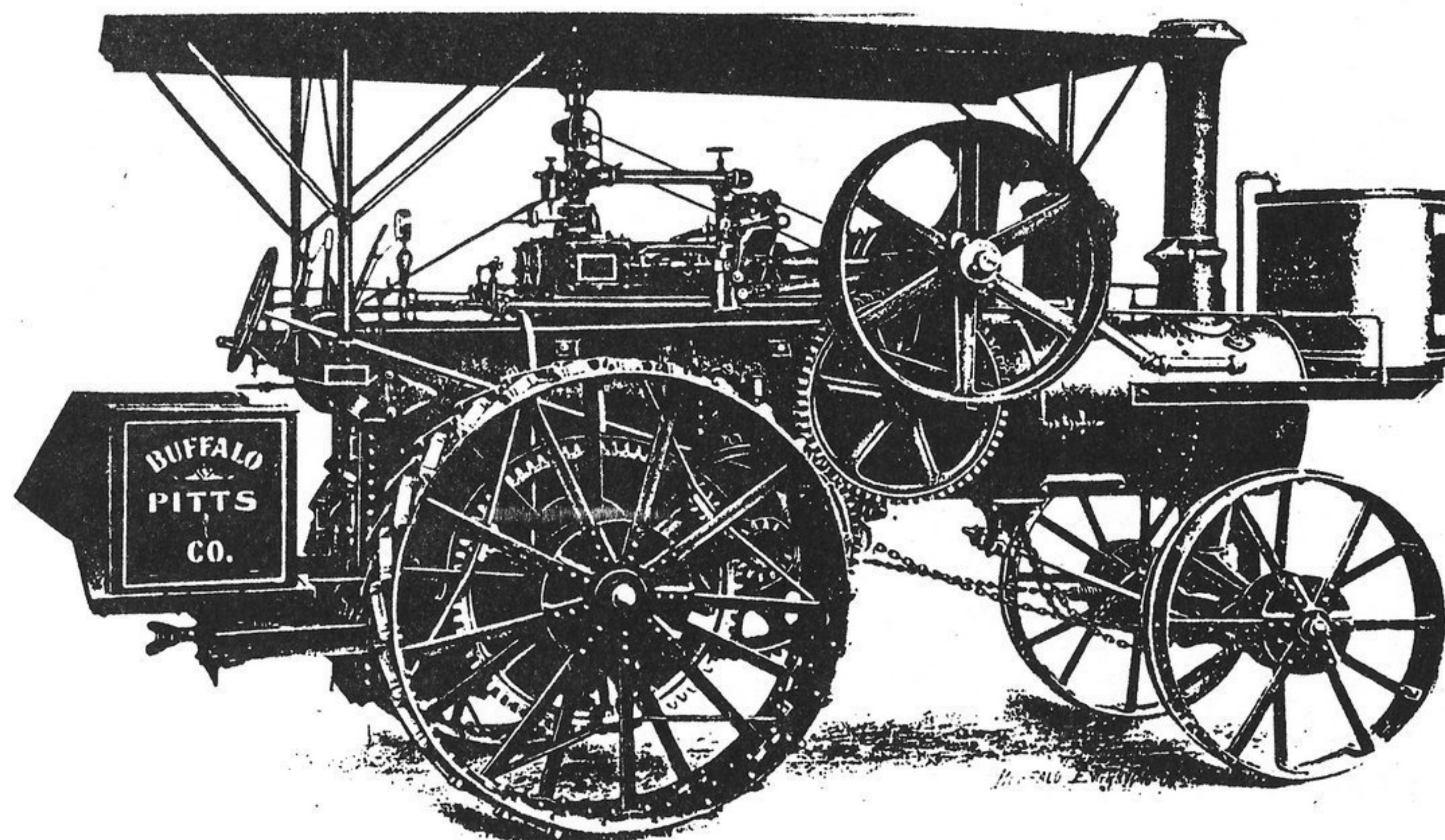
NOTE—If 18-foot Stacker is wanted with Niagara Junior Separator, add \$30.00; if 22-foot, 2 piece, for Niagara, or Niagara Second, add \$45.00.

When the Separator is equipped with self-feeder, hand-feeding attachments are not furnished; if wanted add \$10.00.



1906

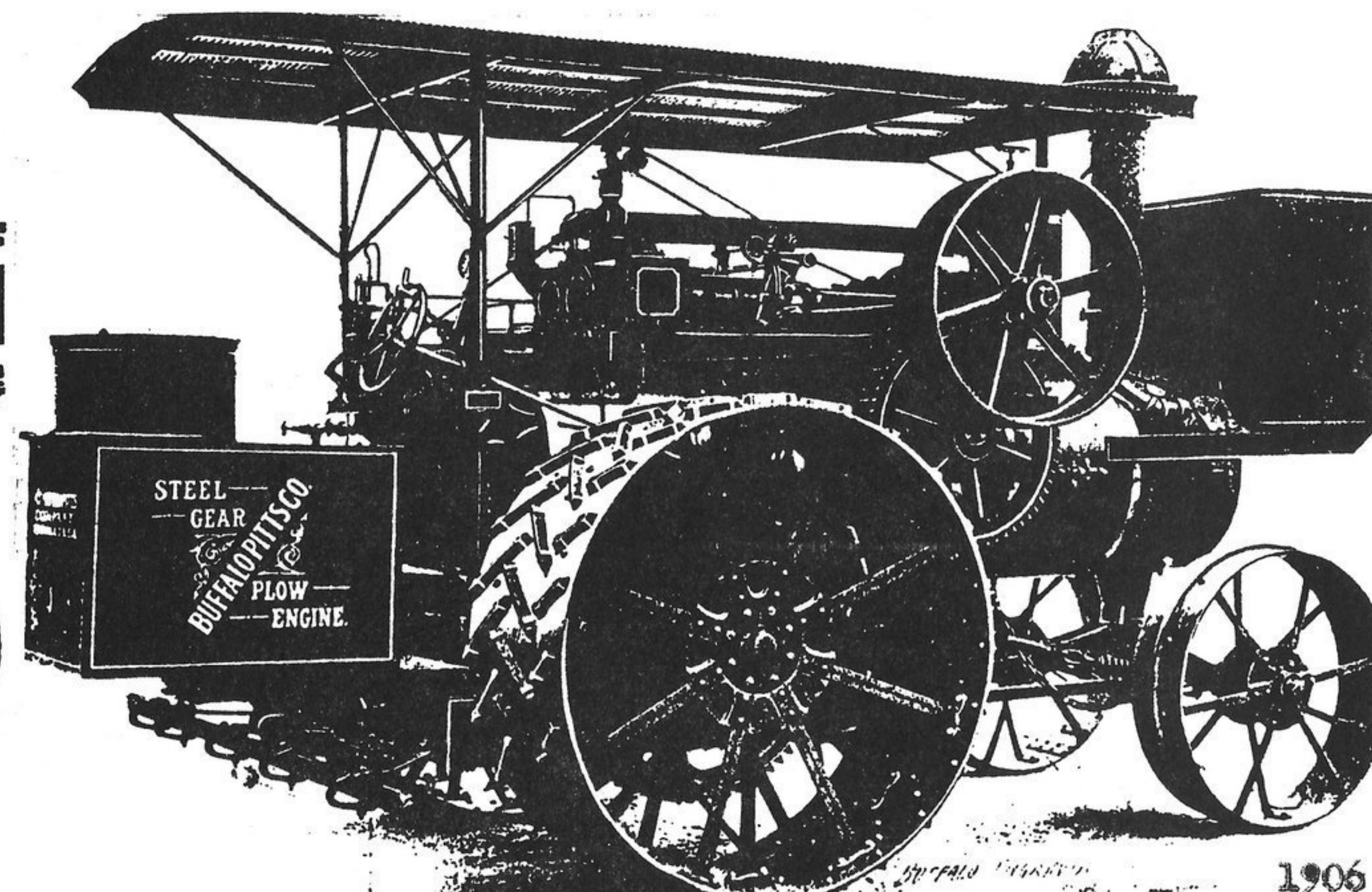
Buffalo Pitts 15 Horse-Power Single Cylinder Traction Engine—Locomotive Boiler



Buffalo Pitts Double Cylinder Traction Engine

Illustration of 18 Horse-Power—Regular

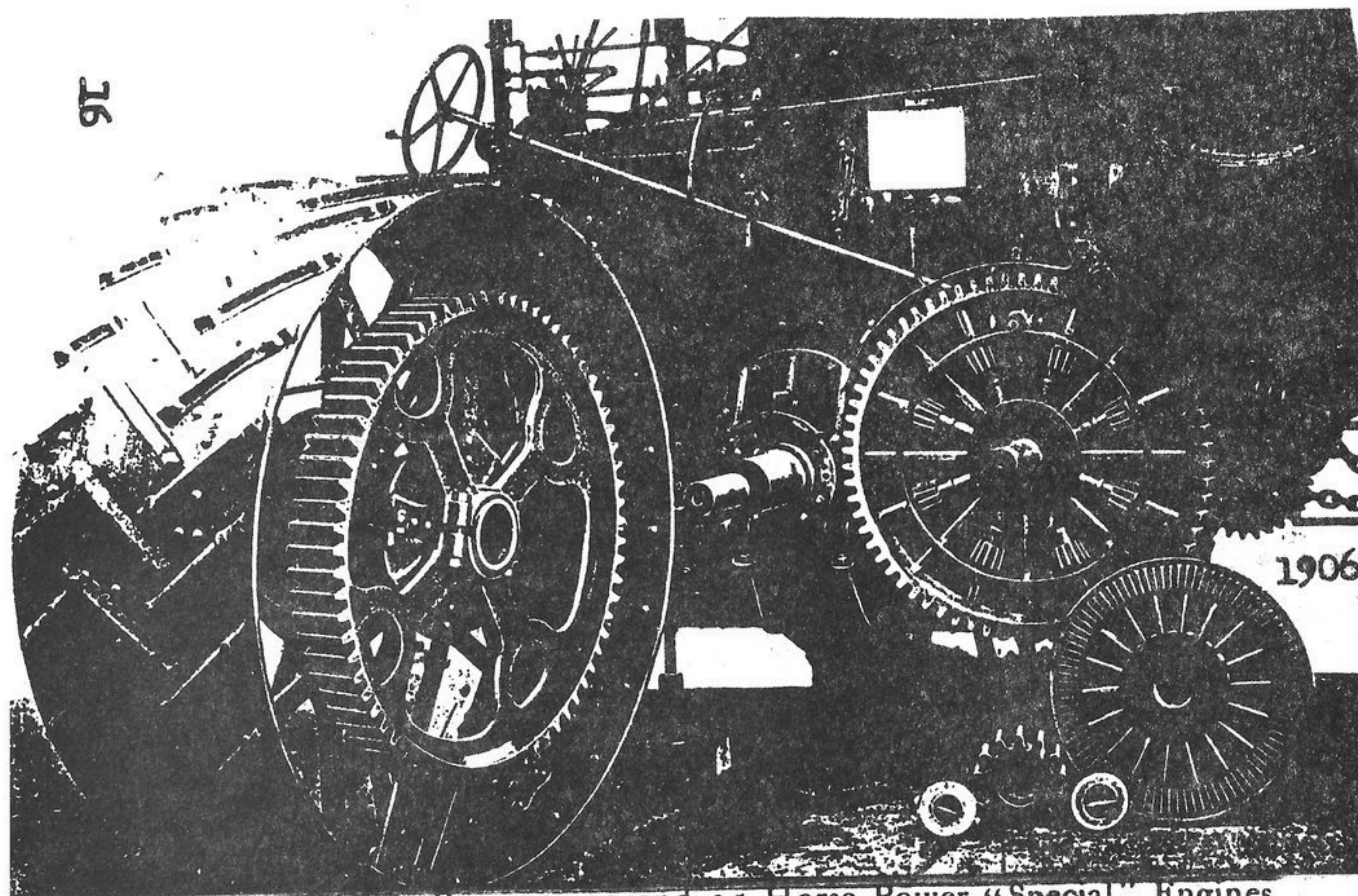
1906



Buffalo Pitts Double Cylinder, Special, Traction Engine

1906

The above cut illustrates the 30 and 35 Horse-Power "Special" Steel Geared Traction Engine, mounted on 78-inch rear wheels, 32-inch face, extra spokes supporting the rim. The front wheels are 14-inch face. The cut shows the engine with a short plow draw-bar as used in breaking. These engines will be furnished to burn coal, wood, straw or oil as ordered.



Gearing on Buffalo Pitts 22, 30 and 35 Horse-Power "Special" Engines

This open cut shows how easily the gearing is reached. A small lifting jack is placed under the corner of the boiler, the engine wheel is slid off, and at once full access is had to all the main gears. The compensating wheel is very large, carrying eight steel pinions. The main spur gear is solid cast steel. Six inch face. Heavy renewable brass bushings in the hubs of the rear wheels run on a steel axle, thereby reducing the friction to a minimum.

1906

Dimensions of Traction Engines

DOUBLE CYLINDER

RATED HORSE-POWER	14	18	22	22 Special	30	35
CYLINDERS:						
Diameter	6 in. & 6 in.	6 1/4 in. & 6 1/4 in.	7 in. & 7 in.	7 in. & 7 in.	7 1/2 in. & 7 1/2 in.	8 1/2 in. & 8 1/2 in.
Stroke	10 in. & 10 in.	10 in. & 10 in.	10 in. & 10 in.	10 in. & 10 in.	12 in. & 12 in.	12 in. & 12 in.
BOILER:						
Style of	Locomotive	Locomotive	Universal	Universal	Universal	Universal
Diameter	30 inches	30 inches	33 inches	33 inches	38 inches	40 inches
Fire box, height	42 inches	42 inches	44 inches	44 inches	47 inches	50 inches
Fire box, length	44 inches	44 inches	44 inches	44 inches	46 inches	48 inches
Fire box, width	26 inches	26 inches	29 inches	29 inches	33 inches	35 inches
Tubes, number	39	39	52	52	67	78
Tubes, diameter	2 inches	2 inches	2 inches	2 inches	2 inches	2 inches
Tubes, length	72 inches	84 inches	84 inches	84 inches	84 inches	84 inches
Graze area, square feet	7.94	7.94	8.86	8.86	10.34	11.66
Heating surface, square feet	166	188	242	242	328	371
Steam pressure, lbs. per square inch	140	140	140	140	140	140
FLY WHEEL:						
Diameter	44 inches	44 inches	46 inches	46 inches	46 inches	46 inches
Face	9 1/2 inches	9 1/2 inches	10 1/2 inches	10 1/2 inches	10 1/2 inches	10 1/2 inches
Revolutions per minute	260	260	250	250	250	250
Approximate miles per hour engine travels at above revolutions per minute	3	3	3	3	3	3
REAR WHEELS:						
Diameter	66 inches	66 inches	66 inches	78 inches	78 inches	78 inches
Face	16 inches	20 inches	20 inches	24 inches	24 inches	24 inches
Wider tires supplied, to order, at extra price						
FRONT WHEELS:						
Diameter	45 inches	48 inches	48 inches	51 inches	51 inches	51 inches
Face	7 inches	9 inches	9 inches	12 inches	14 inches	14 inches
Distance between axles	8 ft. 6 in.	9 ft. 6 in.	9 ft. 6 in.	9 ft. 10 in.	10 ft. 4 in.	10 ft. 4 in.
Extreme width of engine	6 ft. 9 1/2 in.	7 ft. 5 1/2 in.	7 ft. 9 in.	8 ft. 5 in.	8 ft. 10 in.	9 feet

1906

Dimensions of Traction Engines

SINGLE CYLINDER

RATED HORSE POWER	8	10	15	18	20	25	30
CYLINDER :							
Diameter	6½ inches	7 inches	8½ inches	8½ inches	9½ inches	10 inches	11½ inches
Stroke	9 inches	10 inches	10 inches	12 inches	12 inches	12 inches	12 inches
BOILER :							
Style of	Locomotive	Locomotive	Locomotive	Locomotive	Universal	Universal	Universal
Diameter	26 inches	26 inches	30 inches (short)	30 inches (long)	33 inches	36 inches	38 inches
Fire box, height	33 inches	33 inches	42 inches	42 inches	45 inches	46 inches	47 inches
Fire box, length	32 inches	32 inches	44 inches	44 inches	44 inches	46 inches	46 inches
Fire box, width	22 inches	22 inches	26 inches	26 inches	29 inches	31 inches	33 inches
Tubes, number	32	32	39	39	52	54	67
Tubes, diameter	2 inches	2 inches	2 inches	2 inches	2 inches	2 inches	2 inches
Tubes, length	60 inches	60 inches	72 inches	84 inches	84 inches	84 inches	84 inches
Graze area, square feet	4.88	4.88	7.94	7.94	8.86	9.74	10.54
Heating surface, square feet	106	106	150	170	242	285	328
Steam pressure, lbs. per square inch	140	140	140	140	140	140	140
FLY WHEEL :							
Diameter	36 inches	36 inches	44 inches	44 inches	46 inches	46 inches	46 inches
Face	8½ inches	8½ inches	9½ inches	9½ inches	10½ inches	10½ inches	10½ inches
Revolutions per minute	270	270	260	260	250	250	250
Approximate miles per hour engine travels at above revs. per minute.	3	3	3	3	3	3	3
REAR WHEELS :							
Diameter	60 inches	60 inches	66 inches	66 inches	66 inches	78 inches	78 inches
Face	10 inches	12 inches	16 inches	20 inches	20 inches	24 inches	24 inches
Wider tires supplied, to order, at extra price							
FRONT WHEELS :							
Diameter	42 inches	42 inches	45 inches	48 inches	48 inches	51 inches	51 inches
Face	5 inches	5 inches	7 inches	9 inches	9 inches	12 inches	14 inches
Distance between axles	7 feet 2 inches	7 feet 2 inches	8 feet 6 inches	9 feet 6 inches	9 feet 6 inches	10 feet 4 inches	10 ft. 4 in.
Extreme width of engine	5 feet 6 inches	5 feet 10 inches	6 feet 9½ inches	7 feet 5½ inches	7 feet 9 inches	8 feet 7½ inches	8 ft. 10 in.

1906

ENGINES.

Buffalo Pitts Straw-Burning Traction Engines.

TELEGRAPH WORD	SINGLE CYLINDER.	PRICE
Tendrils	15 Horse-Power	\$1785
Tenebross	18 "	1950
Tentory	20 "	2085
Tenuity	25 "	2370
Terebinth	30 "	2665
Testate	25 " Return Flue	2370
DOUBLE CYLINDER.		
Tholus	14 Horse-Power	\$2020
Thraldom	18 "	2260
Thrones	22 "	2475
Thrus	22 " Special	2720
(With 78-in. Wheels, 24-in. Tires, Heavy Gears, etc. See catalogue.)		
Thumbkin	27 Horse-Power	2880
Thumper	35 "	3200

Buffalo Pitts Coal or Wood-Burning Traction Engines.

TELEGRAPH WORD	SINGLE CYLINDER.	PRICE
Tenement	8 Horse-Power	\$1320
Tenfold	10 "	1430
Tenrec	15 "	1700
Tentacula	18 "	1875
Tenterhook	20 "	2005
Tentful	25 "	2290
Teraphim	30 "	2585
DOUBLE CYLINDER.		
Thebans	14 Horse-Power Regular	\$1940
Themes	18 "	2180
Theocratic	22 "	2400

Thermidor	22 " Special	2640
(With 78 in. Wheels, 24-in. Tires, Heavy Gears, etc. See catalogue.)		
Thermostat	27 Horse-Power	2800
Therapy	35 "	3125

Tongue, Neckyoke and Whiffletrees, when furnished with Traction Engine. \$10

SPECIAL—32-in. tire rear wheels and 14-in. front wheels furnished with 25-Horse Engines and larger at \$100 extra

Double Cylinder Plowing Engines, Complete.

Coal, Wood or Straw Burning.

Equipped as follows: Wheels 78-in. diameter, 32-in. face, steel gears, 300 gallon tank on front of engine, 200 gallon tank on platform, 2-in. Ejector, Plowing Draw Bar, Cab and Headlight.

Thickened	22 Horse-Power, complete as above	\$2075
Thickly	27 "	3130
Thickest	35 "	3450

1906

EXTRAS.

TELEGRAPH WORD	PRICE
Tetchiness Special Draw Bar for Plowing, etc.	\$ 75
Tetragon Extra size 300 Gallon Tank for front of Hauling and Plowing Engines.	25
Tetanus Jacketing Boilers on Coal-burning Engines	50
Tethys Water and Fuel Tank on Trucks (Steel)	100
Tetrad Tank alone (Steel)	60
Tetchy Water and Fuel Tank on Trucks (Wood)	75
Tethered Tank alone (Wood)	35
Thankful Tank Pump with Suction and Discharge Hose	25
Theism Cab for Engine	40
Tonsils Headlight with large Lens	12
Tetrapla 200 Gallon Water Tank on Platform for Plowing	40

THRESHERS.

Buffalo Pitts Niagara Junior Threshers.

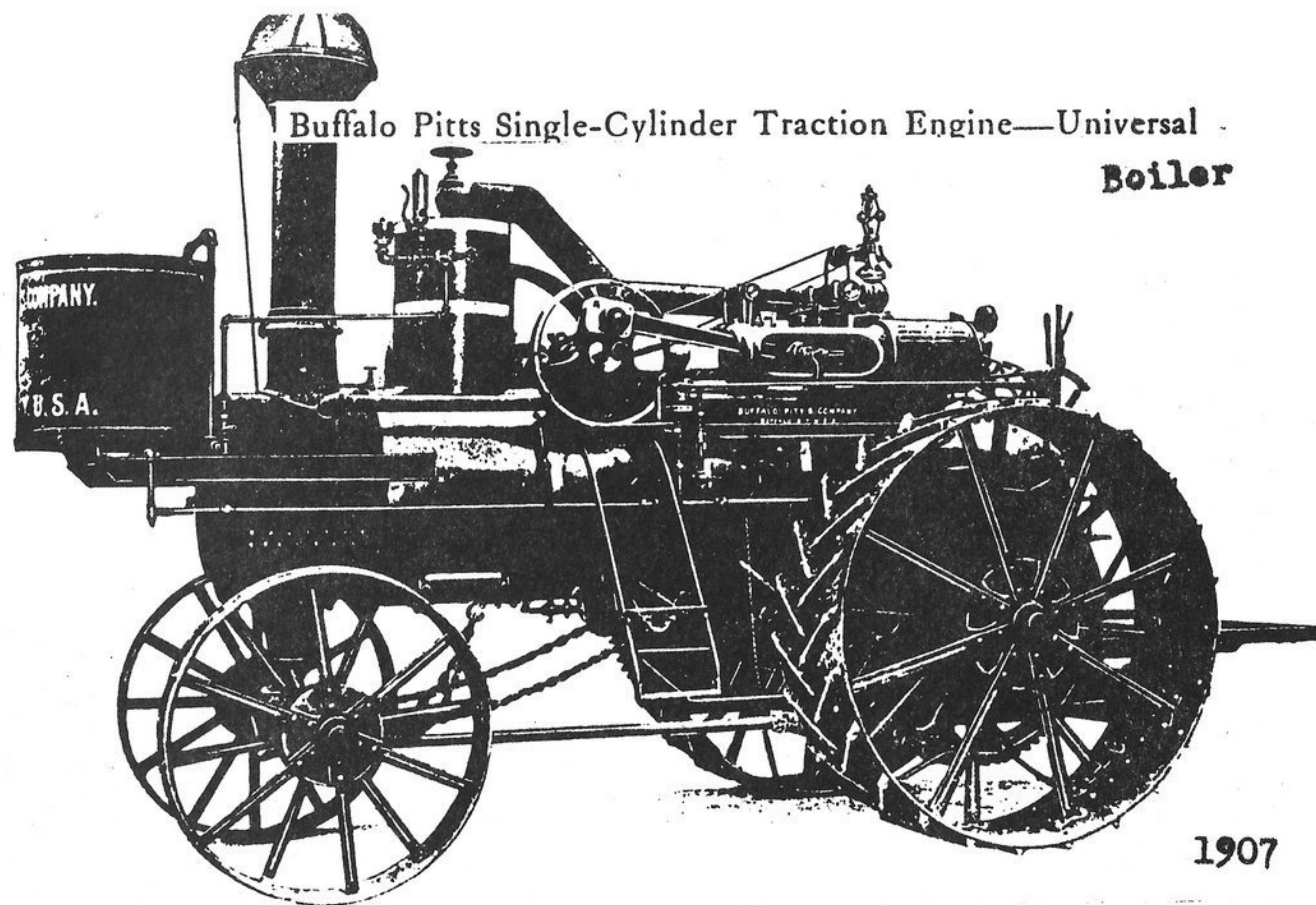
Tabletalk	23 x 48 Separator, without Stacker or Carrier	\$485
Tableshore	32 x 54 Separator, without Stacker or Carrier	500

Buffalo Pitts Niagara Second Threshers.

Talc	28 x 48 Separator, without Stacker or Carrier	\$470
Talcite	32 x 54 Separator, without Stacker or Carrier	505
Talcous	38 x 60 Separator, without Stacker or Carrier	600
Talcstate	41 x 66 Separator, without Stacker or Carrier	655

NOTE—If 18-foot Stacker is wanted with Niagara Junior Separator, add \$30.00; if 22-foot, 2 piece, for Niagara Second, add \$45.00.

When the Separator is equipped with self-feeder, hand-feeding attachments are not furnished; if wanted add \$10.00.



Buffalo Pitts Single-Cylinder Traction Engine—Universal
Boiler

1907

Illustration of 25 Horse Power Engine, Left-Hand Side. Burns Coal, Wood or Straw

This style of engine with link valve gear, will be furnished in three sizes as follows: 20, 25 and 30 horse power. Coal and wood burning engines are furnished with fuel boxes on platform. The 20 horse power engine has 20-inch face wheels. The 25 and 30 horse power 24-inch face 32-inch tires will be furnished for rear wheels of 25 and 30 horse power sizes at an additional price when so ordered.

Dimensions of Traction Engines

1907

SINGLE CYLINDER

RATED HORSE POWER	8	10	15	18	20	25	30
CYLINDER:							
Diameter	6 1/2 inches	7 inches	8 1/2 inches	8 1/2 inches	9 1/2 inches	10 inches	11 1/2 inches
Stroke	9 inches	10 inches	10 inches	12 inches	12 inches	12 inches	12 inches
BOILER:							
Style of	Locomotive	Locomotive	Locomotive	Locomotive	Universal	Universal	Universal
Diameter	26 inches	26 inches	30 inches (short)	30 inches (long)	33 inches	36 inches	38 inches
Fire box, height	33 inches	33 inches	42 inches	42 inches	45 inches	46 inches	47 inches
Fire box, length	32 inches	32 inches	44 inches	44 inches	44 inches	46 inches	46 inches
Fire box, width	22 inches	22 inches	26 inches	26 inches	29 inches	31 inches	33 inches
Tubes, number	32	32	39	39	52	54	67
Tubes, diameter	2 inches	2 inches	2 inches	2 inches	2 inches	2 inches	2 inches
Tubes, length	60 inches	60 inches	72 inches	84 inches	84 inches	84 inches	84 inches
FLY WHEEL:							
Diameter	36 inches	36 inches	44 inches	44 inches	46 inches	46 inches	46 inches
Face	8 1/2 inches	8 1/2 inches	9 1/2 inches	9 1/2 inches	10 1/2 inches	10 1/2 inches	10 1/2 inches
Revolutions per minute	270	270	260	260	250	250	250
REAR WHEELS:							
Diameter	60 inches	60 inches	66 inches	66 inches	66 inches	78 inches	78 inches
Face	10 inches	12 inches	16 inches	20 inches	20 inches	24 inches	24 inches

Wider tires supplied, to order, at small additional cost

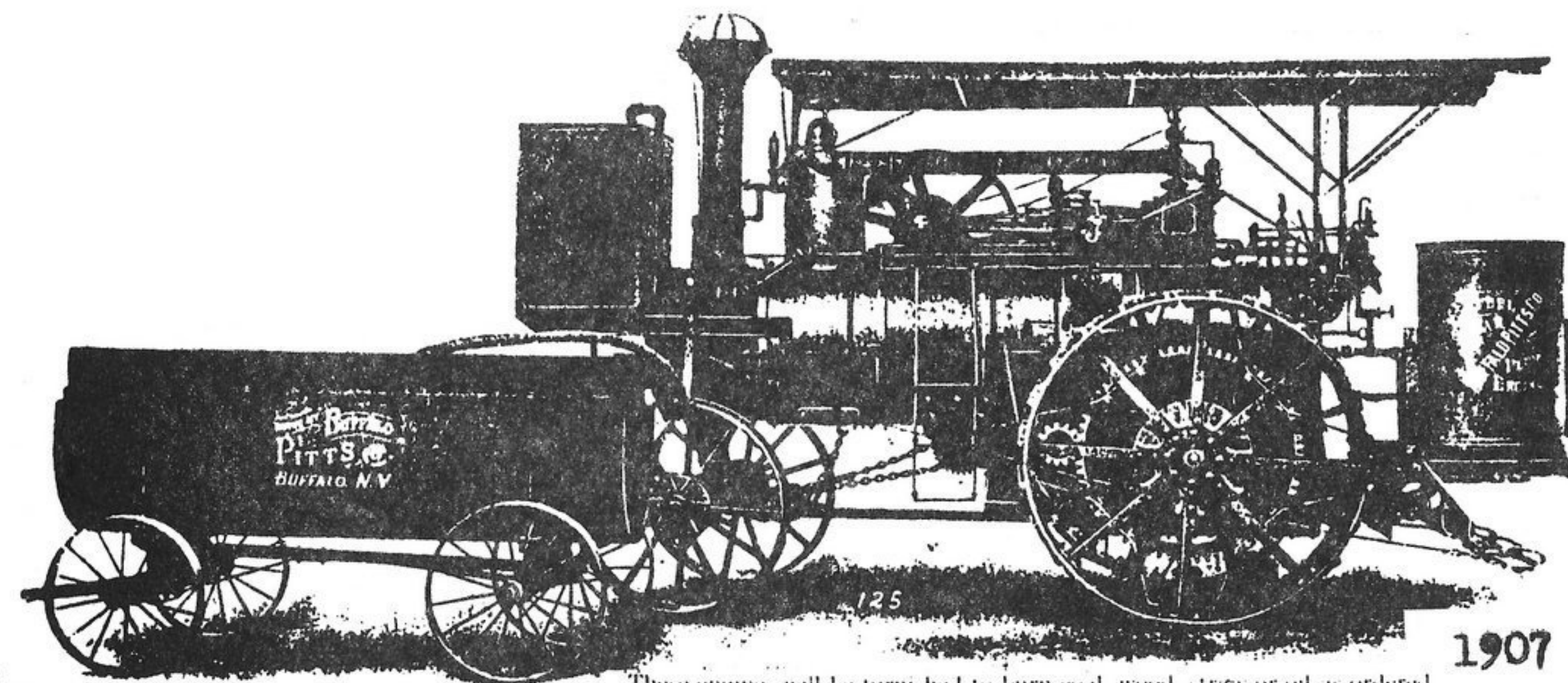
DOUBLE CYLINDER

RATED HORSE POWER	14	18	22	22 Special	30	35
CYLINDERS:						
Diameter	6 in. & 6 in.	6 1/2 in. & 6 1/2 in.	7 in. & 7 in.	7 in. & 7 in.	7 1/2 in. & 7 1/2 in.	8 1/2 in. & 8 1/2 in.
Stroke	10 in. & 10 in.	10 in. & 10 in.	10 in. & 10 in.	10 in. & 10 in.	12 in. & 12 in.	12 in. & 12 in.
BOILER:						
Style of	Locomotive	Locomotive	Universal	Universal	Universal	Universal
Diameter	30 inches	30 inches	33 inches	33 inches	38 inches	40 inches
Fire box, height	42 inches	42 inches	45 inches	45 inches	47 inches	50 inches
Fire box, length	44 inches	44 inches	44 inches	44 inches	46 inches	48 inches
Fire box, width	26 inches	26 inches	29 inches	29 inches	33 inches	35 inches
Tubes, number	39	39	52	52	67	78
Tubes, diameter	2 inches	2 inches	2 inches	2 inches	2 inches	2 inches
Tubes, length	72 inches	84 inches	84 inches	84 inches	84 inches	84 inches
FLY WHEEL:						
Diameter	44 inches	44 inches	46 inches	46 inches	46 inches	46 inches
Face	9 1/2 inches	9 1/2 inches	10 1/2 inches	10 1/2 inches	10 1/2 inches	10 1/2 inches
Revolutions per minute	260	260	250	250	250	250
REAR WHEELS:						
Diameter	66 inches	66 inches	66 inches	78 inches	78 inches	78 inches
Face	16 inches	20 inches	20 inches	24 inches	24 inches	24 inches

Portable Engines are built in all the above sizes.

Wider tires supplied, to order, at small additional cost.

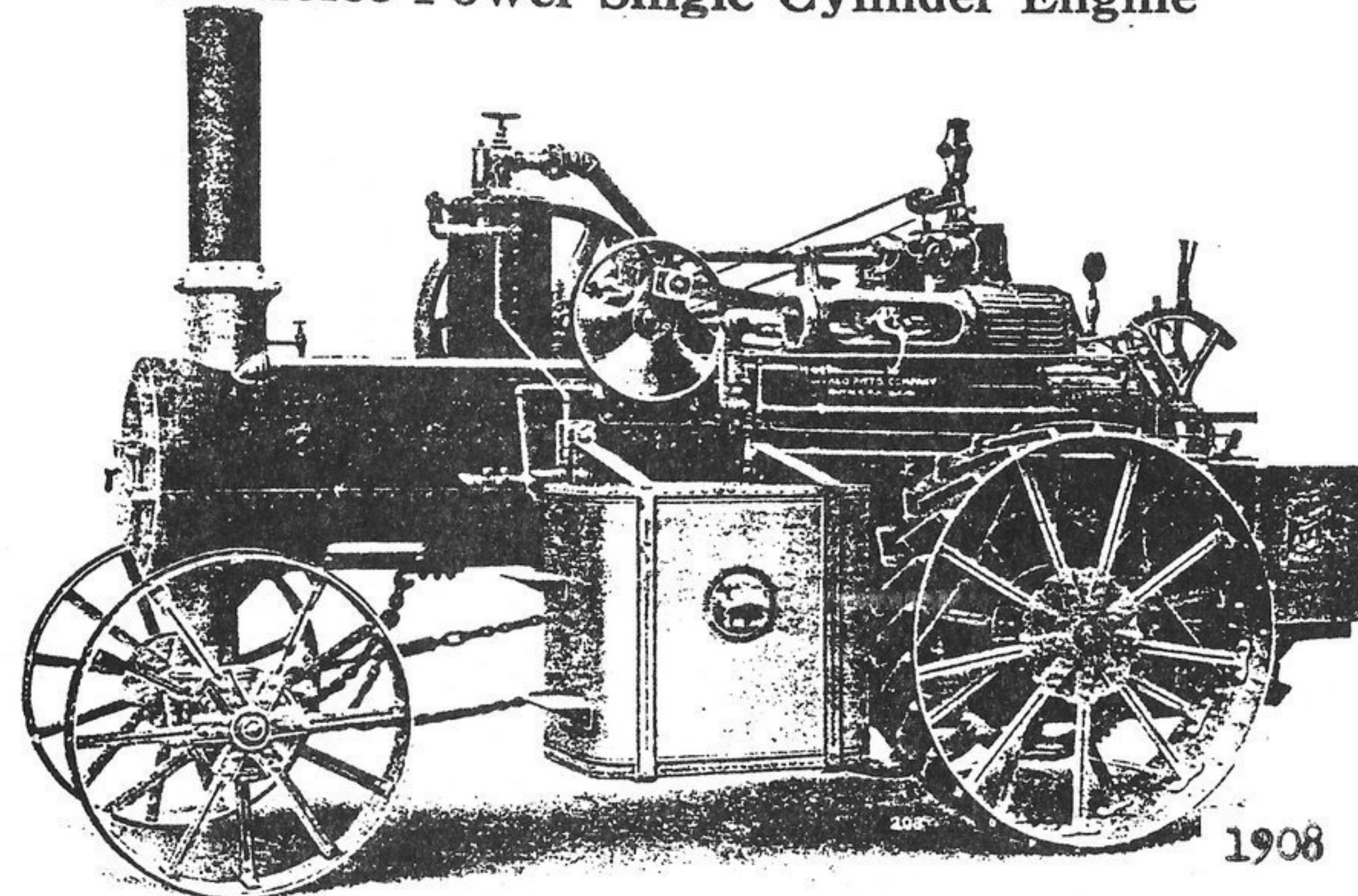
SPECIAL NOTICE! We reserve the right to vary from the above specifications without notice.



Buffalo Pitts Double-Cylinder Special Traction Engine, Left Hand Side

The cut represents our 30 and 35 horse power "special" steel geared traction engine, with long plow draw bar. The plow draw bar can be put on or taken off in a few minutes. The traction wheels are six feet six inches high and have 14-inch tires. The front wheels are 34 inch high and 14-inch tires. The water tank is in position for filling the boiler while engine is traveling: a great saving in time when plowing with the engine.

20 Horse Power Single Cylinder Engine



Buffalo Pitts 20 horse power Single Cylinder Traction Engine with 20-inch Traction Wheels.

The strongest and best threshing engine on the market for the price. The most engine for the least money. Will run a large thresher complete with all attachments.

This engine is also made with Steel Axle Brackets and 24-inch face-wheels bushed with Phosphor Bronze.

Buffalo Pitts Double Cylinder Traction Engine

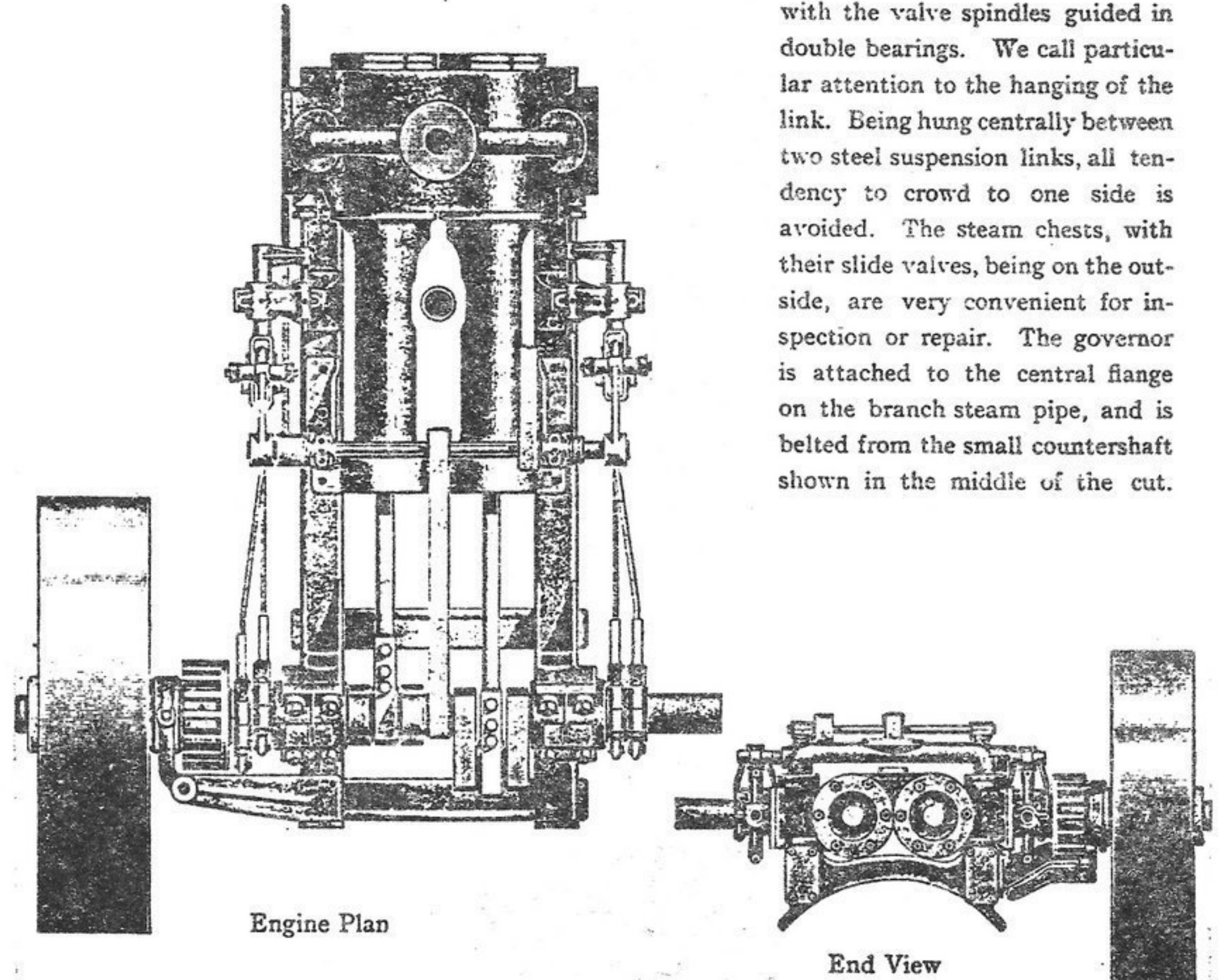
No Shock to Shafting or Gearing in Starting!

No Dead Center! No Lost Motion!

1908

THE illustration shows the working parts of our double cylinder engine. It will be seen that this engine is complete in every detail. The fitting of the cylinder and bored guides inside the frame makes a firm and

rigid construction, and renders it impossible for the cylinders to get out of alignment with the crank shaft, which is substantially housed in this frame. The illustration also plainly shows the construction of the link motion valve gear, with the valve spindles guided in double bearings. We call particular attention to the hanging of the link. Being hung centrally between two steel suspension links, all tendency to crowd to one side is avoided. The steam chests, with their slide valves, being on the outside, are very convenient for inspection or repair. The governor is attached to the central flange on the branch steam pipe, and is belted from the small countershaft shown in the middle of the cut.



THIS engine is self-contained, so you can take it off the boiler and bolt it to a saw log, put steam into it and it will develop full power. This construction eliminates any strain on boiler from end thrust of pistons, found in no other engine.

Why Double Engines are Superior

BY the use of double cylinders we produce a machine which has all the simplicity of a single cylinder traction engine and many decided points of superiority. A traction engine is put to a constant and tremendous strain on the road. It is used from morning until night on rough and stony roads. It is subjected to the same kind of use—as far as going backwards and forwards, and starting and stopping, are concerned—as a steam locomotive on a railroad.

No Dead Center.—Everyone is familiar with the way a steam locomotive starts, stops and reverses. The operation of the Buffalo Pitts Double Cylinder Traction Engine is much the same. There is no possibility of stopping on a dead center, and the engine can be started at any point, slowly or at any speed desired. At every point there is a full pressure of steam on the engine shaft, and at no point must the shaft be carried over the center by its own momentum, as in single engines. The result is that there are no shocks to the gears in starting, stopping or reversing; the engine runs evenly, smoothly and on full power throughout.

The 25 and 35 horse power engines will be mounted upon our Universal water-bottom boiler, to burn coal, wood or straw. The smaller sizes on the locomotive boilers have great effective heating capacity, insuring an abundance of steam and economical consumption of fuel.

The Two Cylinders.—The engines are of the self-contained type, mounted side by side on the top of the boiler, thereby not only adding to the appearance of the engine, but balancing it perfectly, as the engines are directly over the center. Each cylinder is complete in itself and separate from the other, having its own steam chest, piston and crossheads, connecting rods, etc. The cylinders are firmly fastened together in a special manner, which makes it impossible for them to get out of line. We use the locomotive link motion, which we find well adapted for this form of construction. The links are provided with simple adjustments for wear. The weight is nicely

distributed over the front and rear wheels, so that the engine will not rear in going up hills.

Particular Advantages.—In a double engine it is not necessary to use an enormously heavy fly wheel, straining the crank shaft and otherwise racking the machine, as there is no dead center requiring the centrifugal force of the fly wheel to carry it over, as in a single engine. There being, in one revolution of a double engine, four admissions and four exhausts of steam, and only two in a single engine, the strains and shocks are reduced one-half; consequently the expense required for its maintenance will be materially lessened. With its four exhausts the draft is steadier and not as violent as when emitted twice, as in a single engine, thus saving the tubes of the boiler from injury.

All the dimensions of the boiler and full information in regard to our engines and attachments are given on other pages

Cab.—With these engines we furnish a cab, as shown in the illustration, which extends over the operator and also covers the engine.

Friction Clutch.—All double engines are equipped with a friction clutch similar to the one put on all our single engines.

1908

The Pitts Special Double Cylinder Plow Engine

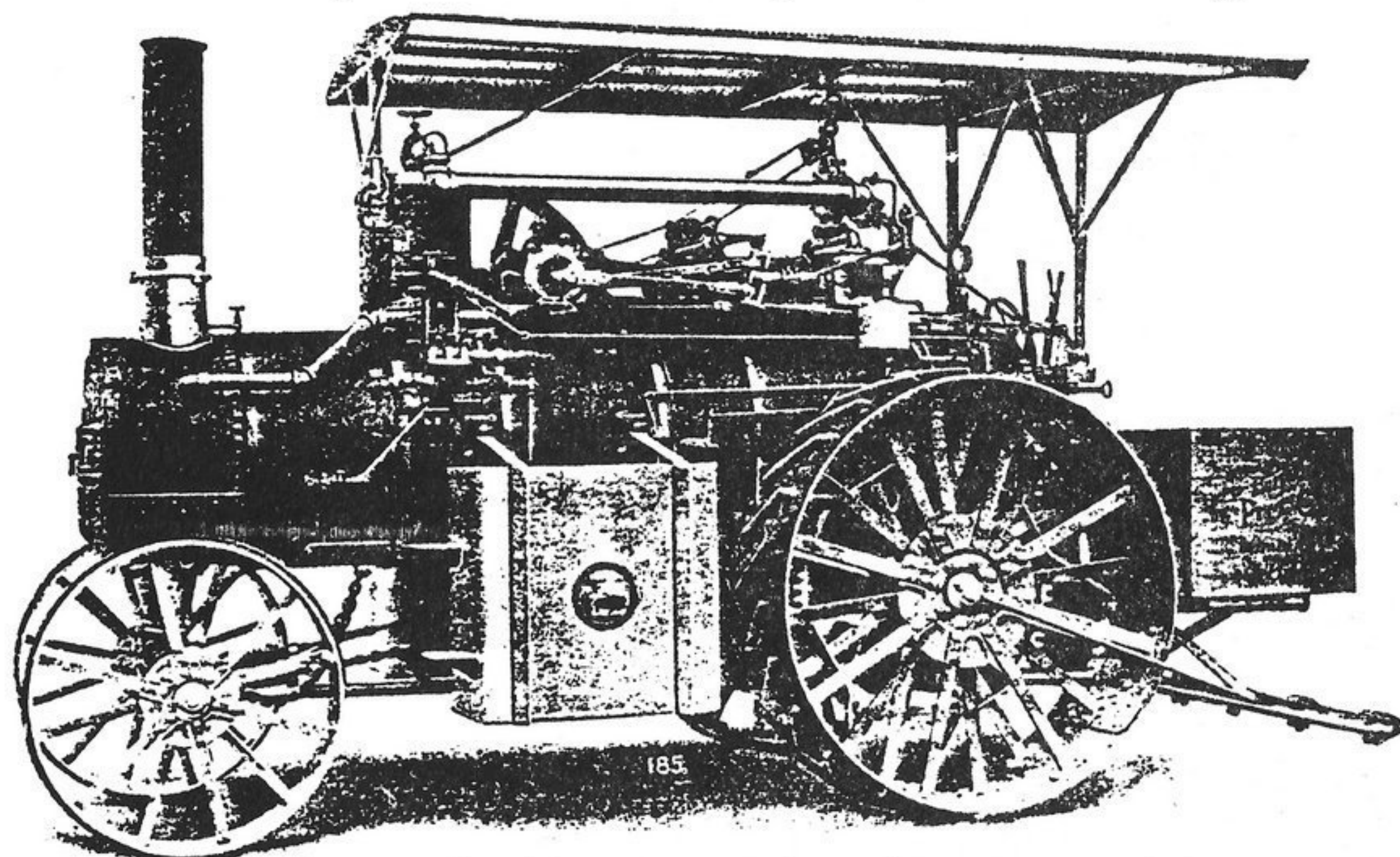
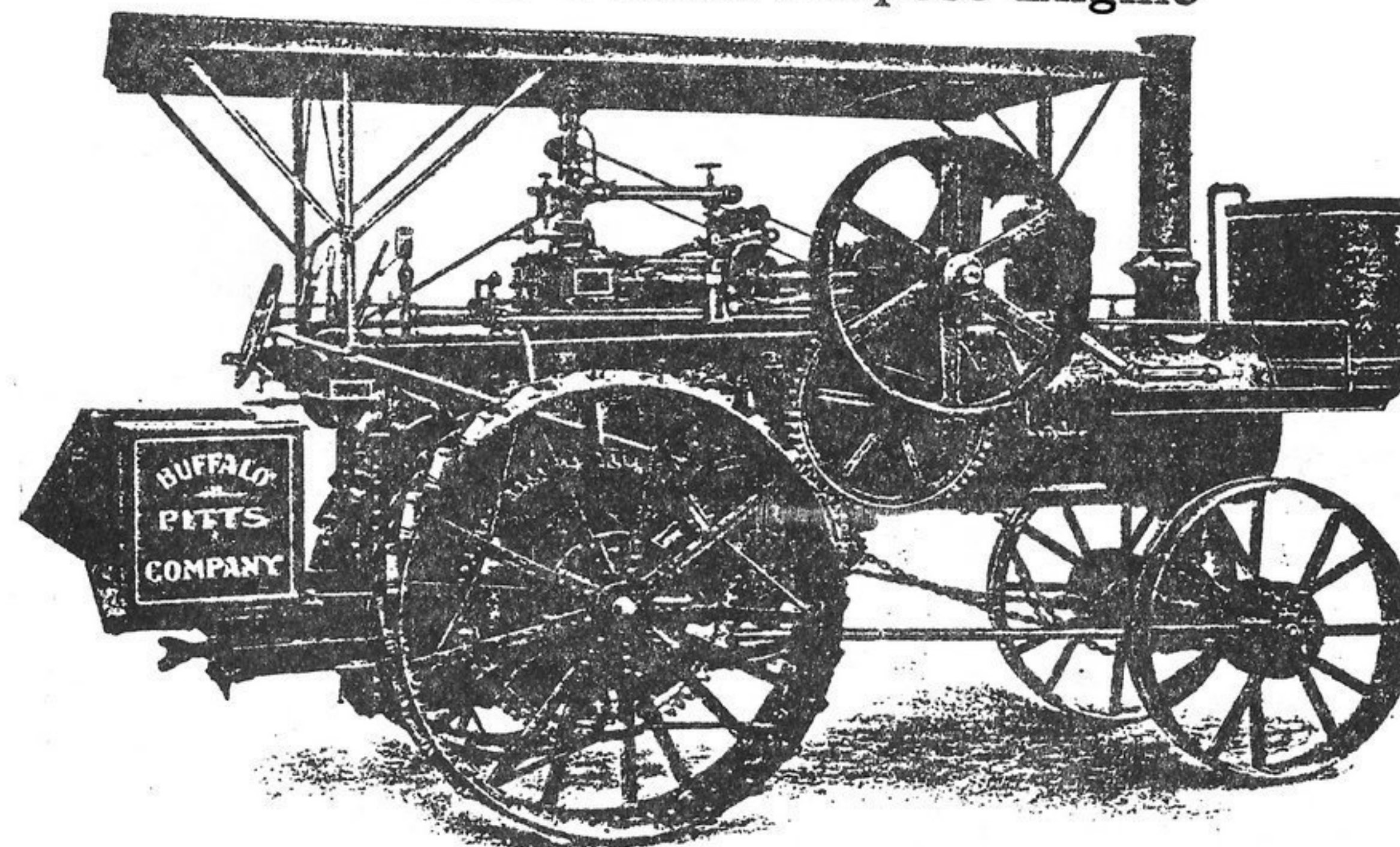


Illustration of the Pitts Special Double Cylinder 25 H. P. Plow Engine, equipped with 32-inch Traction Wheels, extra heavy semi-steel gearing, and side tanks. This engine can be fired with coal, wood, straw or oil. Specifications on page 20. This engine is a success because it is properly built and is the right size. Many failures have been made in steam plowing by attempting to use an engine that is too large and heavy.

1908

The Great General Purpose Engine



Buffalo Pitts 18 horse Double Cylinder Traction Engine, suitable for threshing, hauling graders, running saw mills, etc. A model of perfection. Great in efficiency and durability.

1908

Specifications for Buffalo Pitts Engines—Single Cylinder Type

Specifications for Buffalo Pitts Engines—Double Cylinder Type

1908 EXTRAS FOR ENGINES

BUFFALO PITTS HORSE POWERS

(Dingee-Woodbury Patent)

<i>Thornbush</i>	No. 12. 12-Horse, with Equalizers	\$200
<i>Threadlace</i>	No. 14. 14-Horse, with Equalizers	210

Articles Included in Prices of Horse-Powers

Dr ^{et} and brace rods, two tumbling rods, couplings, driver's platform; also wrench, oil can, sledge, extra coupling, wagon complete with whiffletrees, neckyoke, ground fastening and rack for carrying sweeps.

THRESHERS

Prices are for goods delivered without extra charge on board boat or cars at the factory, Buffalo, N. Y., U. S. A.

Buffalo Pitts NIAGARA SECOND Thresher

TELEGRAPH WORD	PRICE
<i>Tale</i> 28x48 Without Stacker or Hand Feel Attachment	\$515
<i>Talcite</i> 32x54 Without Stacker or Hand Feel Attachment	555
<i>Talcous</i> 36x60 Without Stacker or Hand Feel Attachment	640
<i>Talcslate</i> 41x66 Without Stacker or Hand Feel Attachment	630

Articles Included in above Prices of Threshers

Sieves for wheat, oats and barley, also flax and timothy sieves when needed and ordered with machines.

Thresher wagons complete with whiffletrees, neckyoke, oil can, extra concave, two dozen teeth, three wrenches, tooth set. One extra tumbling rod with geared machines.

Buffalo Pitts RICE Threshers

<i>Tabled</i>	28x48 Without Stacker or Hand Feed Attachment	\$515
<i>Tableland</i>	32x54 Without Stacker or Hand Feed Attachment	555

Buffalo Pitts Weighers, Wagon Loaders and Baggers

<i>Taglia</i>	Automatic Weigher and Wagon Loader, Dakota style.....	\$85
<i>Taglocks</i>	Wagon Loader, Dakota style, without Weigher	65
<i>Tailage</i>	Automatic Weigher and Wagon Loader with Cross Conveyor..	85
<i>Tailrace</i>	Wagon Loader with Cross Conveyor, without Weigher.....	65
<i>Tackled</i>	Niagara Short Elevator and Bagger with Tally	25

SINGLE-CYLINDER TRACTION ENGINES

We reserve the right to change any of the following prices without notice.

STRAW BURNING—UNIVERSAL BOILER

<i>Tentory</i>	20	Horse-Power.....	\$2150
<i>Tenuity</i>	25	" "	2500
<i>Terebinth</i>	30	" "	2725
<i>Testate</i>	25	" " Return Flue..	2500

Including Jacketing Boiler.

We build Portable Engines in sizes from 8 to 30 horse-power single, and 14 to 35 horse-power double cylinder. These engines will be furnished mounted on wheels or skids, as desired.

Prices Furnished on Application.

We add a few Code Words to assist in ordering by telegraph.

<i>Throat</i>	32-inch face traction wheels.
<i>Incarnat</i>	How soon can you ship.
<i>Incessan</i>	Ship in addition to previous order.
<i>Incirove</i>	Will be able to ship in about.
<i>Ertnier</i>	Your instructions are not quite definite.
<i>Inceppo</i>	Ship as soon as possible.

For Specifications of Engines, see Annual Catalogue.

DOUBLE-CYLINDER TRACTION ENGINES

Prices include Cab on all D. C. Traction Engines.

COAL OR WOOD BURNING ENGINES		
TELEGRAPH WORD		PRICE
<i>Thebans</i>	14 Horse-Power, Regular.....	\$1950
<i>Themes</i>	18 Horse-Power, Regular.....	2250

DOUBLE-CYLINDER PLOWING ENGINES, COMPLETE

Coal, Wood and Straw Burning—Including Jacketing

Equipped as follows: Steel gears, 300-gallon tank on front of engine, 200 gallon tank on platform, 2-in. Ejector, Plowing Draw Bar, Cab and Headlight.

Thickened	22	Horse-Power, complete, as above	\$2975
Thickset	35	Horse-Power, complete as above	3450

N. B.—The 22 Horse-Power Engine has 24-inch face Drive Wheels. The 35 Horse-Power has 32-inch face wheels.

For Specifications of Engines, see Annual Catalogue.

WATER AND FUEL TANKS

<i>Tethys</i>	Water and Fuel Tank on Trucks (Steel)	\$100
<i>Tetrad</i>	Tank alone (Steel)	60
<i>Tetchy</i>	Water and Fuel Tank on Trucks (Wood)	80
<i>Tethered</i>	Tank alone (Wood)	35

Single Cylinder Traction Engine



Illustration of the 15 and 18 horse power Single Cylinder Traction Engine. This is a high grade engine in every respect. The Buffalo Pitts engines wear longer, are more economical, and do better work than any engine built. Our ten horse power engines are built on practically the same lines as the 15 and 18 horse power.

1909

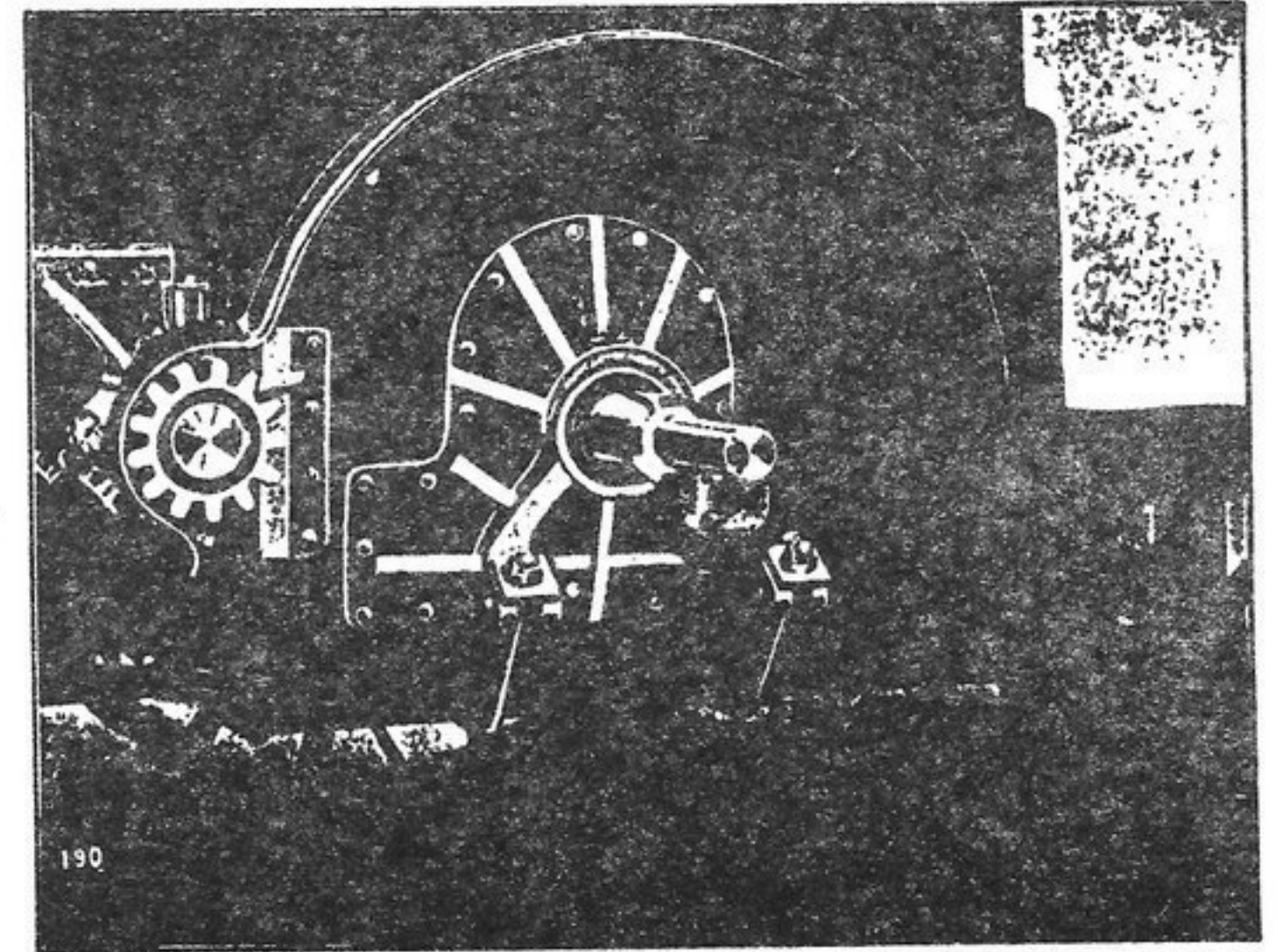
The Axle Bracket on The Pitts Special and 35 Horse Power Double Cylinder Plow Engine

This illustration shows our new axle bracket and the new improved hitch in our special plow engines, which relieves all the pulling strain on the boiler as all the traction power is taken direct from the traction wheel through the axle bracket.

Attention is called to the greatly extended surface of the axle bracket, which covers nearly the whole length of the fire box. This bracket is supported by two *spread apart* $1\frac{1}{4}$ inch truss rods, making a vastly *more rigid* support for the boiler than any through rear axle construction.

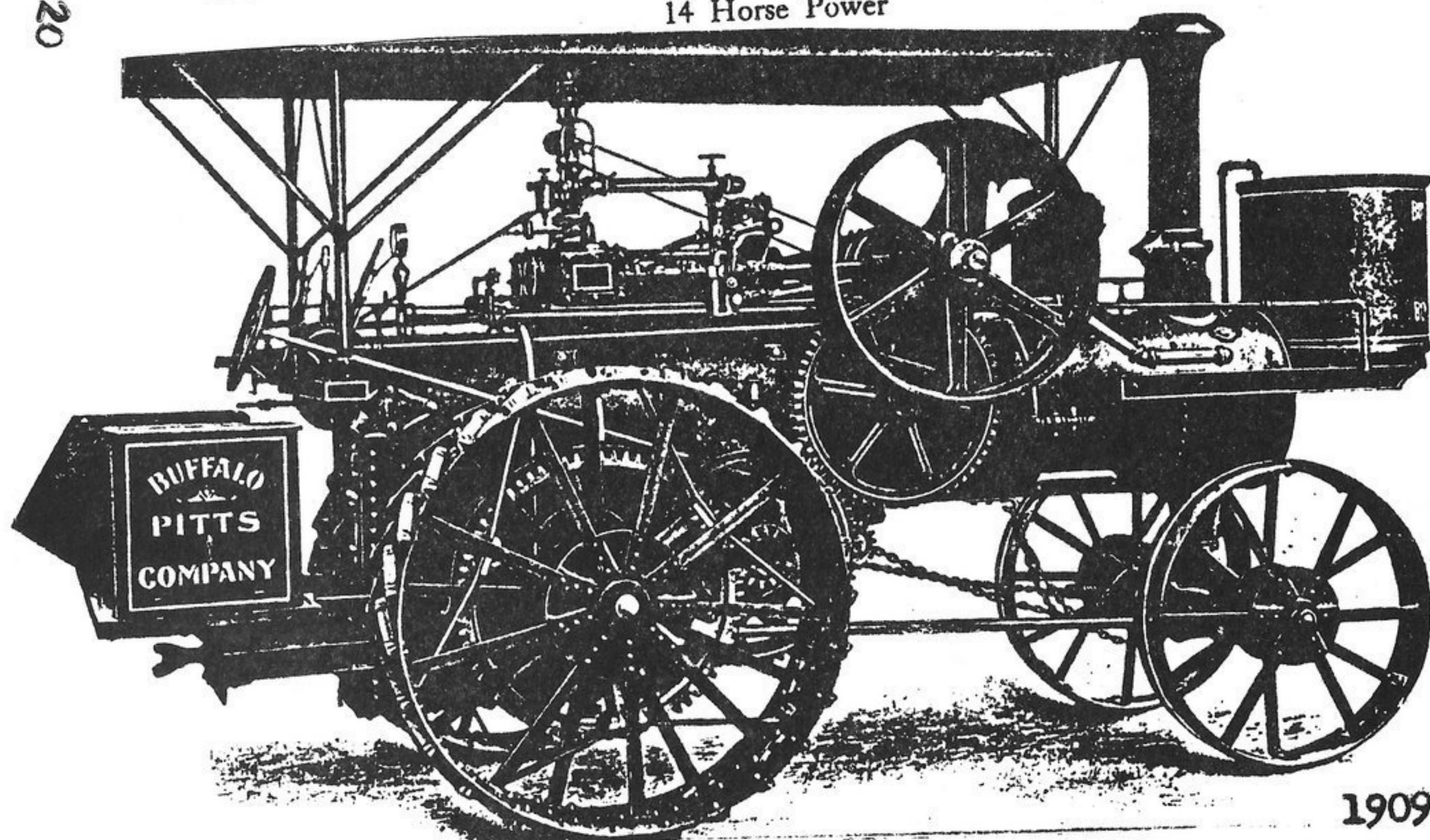
A side mounted engine has many advantages over a rear mounted.

Our side mounted engines have stood the test for years.



Buffalo Pitts Double Cylinder Traction Engine

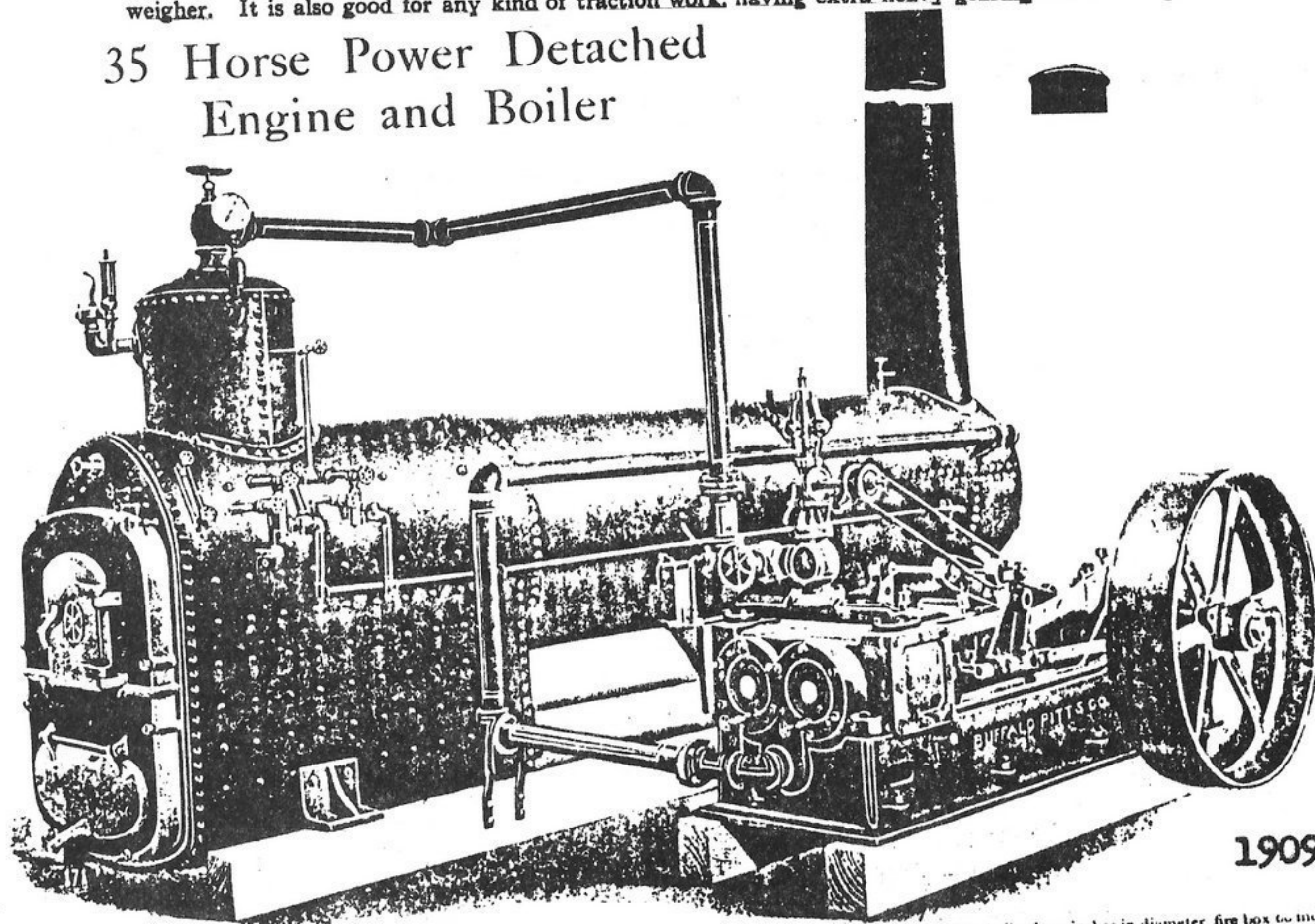
14 Horse Power



1909

This engine has ample power for running a medium size thresher with wind stacker, feeder and weigher. It is also good for any kind of traction work, having extra heavy gearing and shafting.

35 Horse Power Detached Engine and Boiler

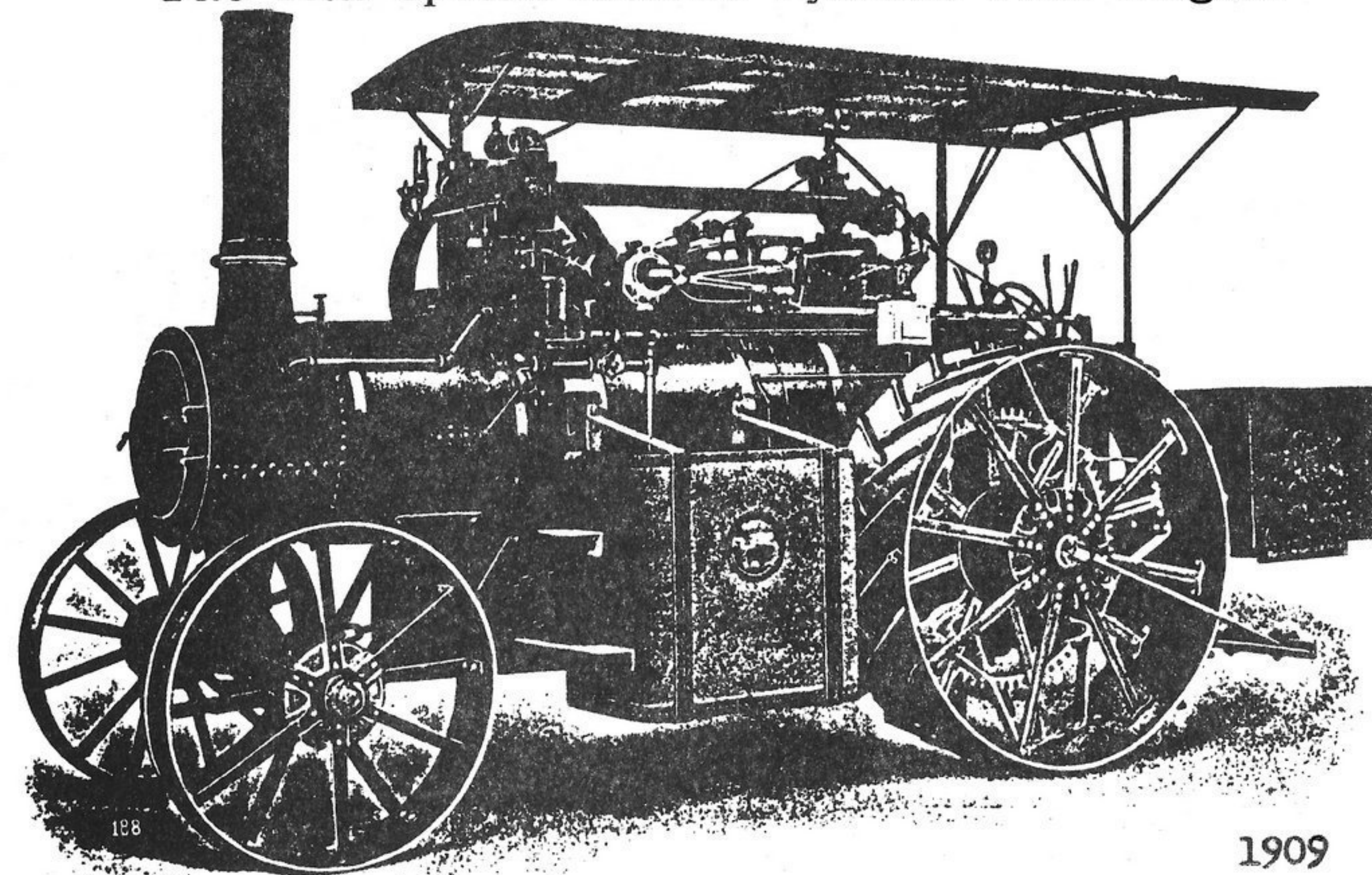


1909

The accompanying illustration portrays our 35 horse power double cylinder engine and 40 horse power boiler, detached. The boiler is 40 inches in diameter, fire box 60 inches long, 34 inches wide, and 43 inches high. It has forty 3 inch tubes, 10 1/2 feet long, has the favorite water bottom, and is made of open hearth, homogeneous steel plate, thoroughly braced and stayed. It is liberally supplied with hand holes for cleaning, and the open front gives easy access to the flues and fire should occasion require it. The engine is our standard 35 horse power double cylinder, 25 1/2 inches diameter, 12 inch stroke, mounted on a strong stationary bed, and has all the advantages incidental to this construction. The bed is made in one piece, and contains the housings or bearings for the crank shaft, and the seat for the cylinders, which are fitted in between planed surfaces, which avoids all danger of their getting out of line. The crank shaft is 3 3/4 inch diameter, a forging of high grade steel, accurately finished and carefully balanced. The fly wheel is 40 inch diameter, 10 3/8 inch face, keyed on the right hand side, but as the shaft projects on either side, an extra band wheel can be put on the left hand side, which is often very desirable. The Pickering governor is used, regulating the engine to 200 revolutions per minute, but this can be readily changed either way to suit conditions, either with the speed arrangement or by changing the diameter of the driven pulley on governor. The boiler and engine are fully equipped with injector, safety valve, cylinder oil pump, water gauge, fittings, etc., and when properly put together we guarantee that nothing will be wanting to make it complete and do good work.

A GREAT ENGINE FOR SAW MILLS, IRRIGATION PLANTS, ETC., BUILT IN ONE SIZE ONLY

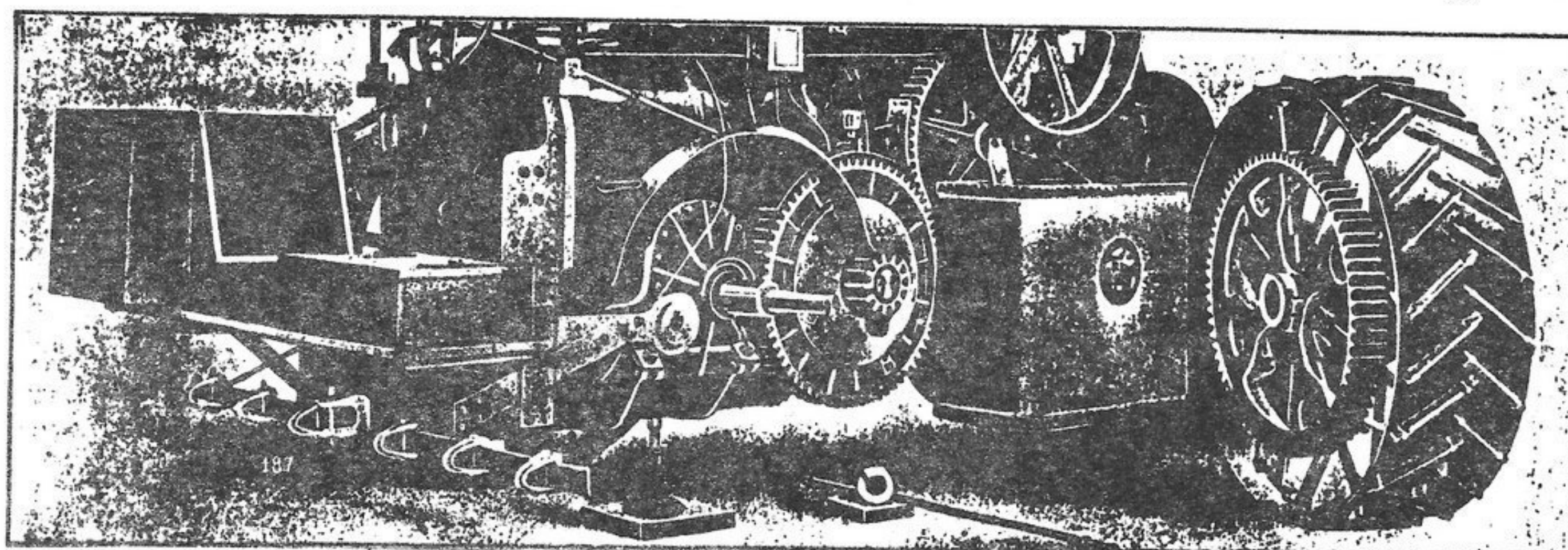
The Pitts Special Double Cylinder Plow Engine



1909

Illustration of the Pitts Special Double Cylinder Plow Engine, equipped with extra heavy semi-steel gearing, and side tanks. This engine can be fired with coal, wool, straw, or oil.

Gearing of the Pitts Special and 35 Horse Power Plow Engines



Specifications of The Pitts Special Double Cylinder Plow Engine

BOILER

Style, Universal
Diameter 35 1/4 inches
Fire box, height 46 inches
Fire box, length 46 inches
Fire box, width 31 inches
Tubes, number 39
Tubes, diameter 3 1/4 inches
Tubes, length 103 inches
Heating surface 283 sq. ft.
Grate area 9.9 sq. ft.
Tested at 225 lbs. hydrostatic pressure

CYLINDERS—Double
Diameter 7 inches each
Stroke 20 inches

FLY WHEEL

Diameter 44 inches
Face 9 1/4 inches
Revolutions per minute

TRACTION WHEELS

Height 78 inches
Width 24 inches
Material. Built up of open hearth steel plate
Spokes, 16 in number, 2 1/4 x 3/4 inches
Steel, with solid forged ends riveted to hub and tire
Cleats, malleable iron riveted to face of wheel

FRONT WHEELS

Height 51 inches
Width 12 inches
Material, open hearth steel plate.
Flat steel spokes riveted to rim and hub. Fitted with a steel band to prevent slipping
Extreme width of engine over all 8 feet 9 inches
Distance between front and rear axle 11 feet 6 inches

GEARING

Semi-steel, large diameter and wide face

POWER

Brake horse power 70

VALVE MOTION

Style, link reverse
Governor, Pickering
Injector, Penberthy
Pump, Independent steam pump, Burnham Type
Oil pump, Mason Kip

BRASS FITTINGS

Extra heavy, made expressly for Buffalo Pitts Company

CRANK SHAFT

Diameter 3 1/4 inches

COUNTERSHAFT

Diameter 5 inches

1909

Specifications subject to change without notice

1909

Specifications of 15 Horse Power Single Cylinder Traction Engines

BOILER

Style, Universal
Diameter 30 inches
Fire box, height 42 inches
Fire box, length 44 inches
Fire box, width 26 inches
Tubes, number 39
Tubes, diameter 2 inches
Tubes, length 72 inches
Heating surface 170 sq. ft.
Grate area 7.9 sq. ft.
Tested at 225 lbs. hydrostatic pressure

CYLINDER

Diameter 8 1/4 inches
Stroke 10 inches

FLY WHEEL

Diameter 44 inches
Face 9 1/4 inches
Revolutions per minute 260

TRACTION WHEELS

Height 66 inches
Width 16 inches
Material. Built up of open hearth steel plate
Spokes, 18 in number, 2 x 3/4 inches
Steel, with solid forged ends riveted to hub and tire
Cleats, malleable iron riveted to face of wheel

FRONT WHEELS

Height 45 inches
Width 12 inches
Material open hearth steel plate. Flat steel spokes riveted to rim and hub. Fitted with a steel band to prevent slipping
Extreme width of engine over all 7 feet 2 inches
Distance between front and rear axle 8 feet 6 inches

GEARING

Semi-steel, large diameter and wide face

POWER

Rated horse power 15
Brake horse power 45

VALVE MOTION

Style of, Woolf reverse
Governor, Pickering
Injector, Penberthy
Pump, Crosshead
Ejector, only when ordered
Oil pump, Mason Kip

BRASS FITTINGS

Extra heavy, made expressly for Buffalo Pitts Company

CRANK SHAFT

Diameter 3 1/4 inches steel

COUNTERSHAFT

Diameter 3 1/4 inches steel

Specifications subject to change without notice

1909

Specifications of 18 Horse Power Single Cylinder Traction Engines

BOILER

Style, Universal
Diameter 30 inches
Fire box, height 42 inches
Fire box, length 44 inches
Fire box, width 26 inches
Tubes, number 39
Tubes, diameter 2 inches
Tubes, length 84 inches
Heating surface 195 sq. ft.
Grate area 7.9 sq. ft.
Tested at 225 lbs. hydrostatic pressure

CYLINDER

Diameter 8 1/4 inches
Stroke 12 inches

FLY WHEEL

Diameter 44 inches
Face 9 1/4 inches
Revolutions per minute 260

TRACTION WHEELS

Height 66 inches
Width 20 inches
Material. Built up of open hearth steel plate
Spokes, 18 in number, 2 x 3/4 inches
Steel, with solid forged ends riveted to hub and tire
Cleats, malleable iron riveted to face of wheel

FRONT WHEELS

Height 48 inches
Width 9 inches
Material, open hearth steel plate. Flat steel spokes riveted to rim and hub. Fitted with a steel band to prevent slipping
Extreme width of engine over all 7 feet 5 1/2 inches
Distance between front and rear axle 9 feet 6 inches

GEARING

Semi-steel, large diameter and wide face

POWER

Rated horse power 18
Brake horse power 54

VALVE MOTION

Style, of Woolf reverse
Governor, Pickering
Injector, Penberthy
Pump, Crosshead
Ejector, only when ordered
Oil pump, Mason Kip

BRASS FITTINGS

Extra heavy, made expressly for Buffalo Pitts Company

CRANK SHAFT

Diameter 3 1/4 inches

COUNTERSHAFT

Diameter 3 1/4 inches

Specifications subject to change without notice

1909

Specifications of 10 Horse Power Single Cylinder Traction Engines

BOILER

Style, Locomotive
Diameter 26 inches
Fire box, height 33 inches
Fire box, length 39 inches
Fire box, width 22 inches
Tubes, number 35
Tubes, diameter 2 inches
Tubes, length 60 inches
Heating surface 118 sq. ft.
Grate area 4.88 sq. ft.
Tested at 225 lbs. hydrostatic pressure

CYLINDER

Diameter 7 inches
Stroke 10 inches

FLY WHEEL

Diameter 36 inches
Face 8 1/4 inches
Revolutions per minute 270

TRACTION WHEELS

Height 60 inches
Width 19 inches
Material, Built up of open hearth steel plate
Spokes, 12 in number, 3/4 x 1/4 inches
Steel, with solid forged ends riveted to hub and tire
Cleats, malleable iron riveted to face of wheel

FRONT WHEELS

Height 49 inches
Width 9 inches
Material, open hearth steel plate. Flat steel spokes
riveted to rim and hub. Fitted with a steel band to
prevent slipping.
Extreme width of engine over all 5 feet 10 inches
Distance between front and rear axle 7 feet 2 inches

GEARING

Semi-steel, large diameter and wide face

POWER

Rated horse power 10
Brake horse power 30

VALVE MOTION

Style of, Woolf reverse
Governor, Pickering 1/4 inches
Injector, Penberthy
Pump, Crosshead
Ejector, only when ordered
Oil pump, Mason Kip

BRASS FITTINGS

Extra heavy, made expressly for Buffalo Pitts Company

CRANK SHAFT

Diameter 2 1/8 inches

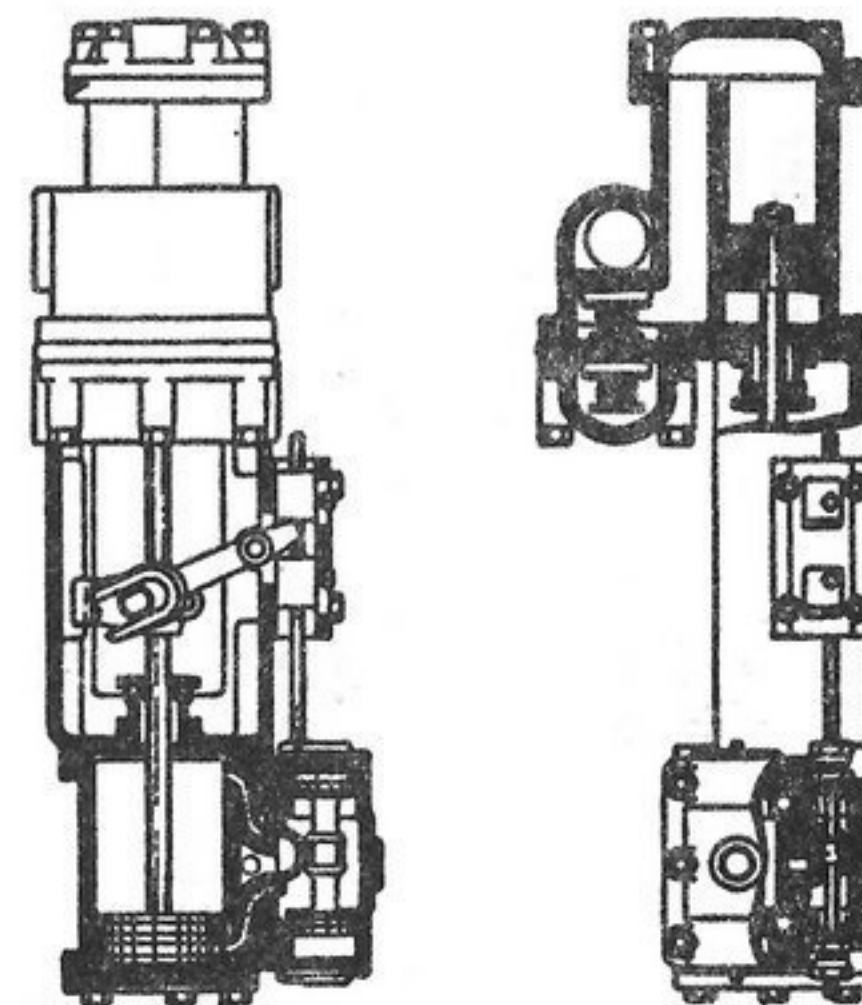
COUNTERSHAFT

Diameter 2 1/4 inches

Specifications subject to change without notice

The Pitts Special Boiler Feed Pump Burnham Type

1909



The Pitts Special Burnham Type Boiler Feed Pump is used on all engines which are equipped with side tanks. This pump runs at a slow speed and feeds the boiler as required. It is also used for filling the tanks, doing the work more rapidly than the injector. The pump running at a slow speed eliminates the wearing out of the parts as is done in high speed pumps. This pump is very effective and yet durable.

Specifications of 20 Horse Power Single Cylinder Traction Engine

BOILER Style, Universal Diameter 33 inches Fire box, height 45 inches Fire box, length 44 inches Fire box, width 29 inches Tubes, number 34 Tubes, diameter $2\frac{1}{2}$ inches Tubes, length 102 Heating surface 253 sq. ft. Grate area 8.8 sq. ft. Tested at 225 lbs. hydrostatic pressure	FRONT WHEELS Height 48 inches Width 9 inches Material, open hearth steel plate. Flat steel spokes riveted to rim and hub. Fitted with a steel band to prevent slipping Extreme width of engine over all 7 feet 10 inches Distance between front and rear axle 11 feet 1 inch
CYLINDER Diameter $9\frac{1}{4}$ inches Stroke 12 inches	GEARING Semi-steel, large diameter and wide face
FLY WHEEL Diameter 46 inches Face $10\frac{1}{2}$ inches Revolutions per minute 250	POWER Rated horse power 20 Brake horse power 60
TRACTION WHEELS Height 66 inches Width 20 inches Material. Built up of open hearth steel plate Spokes, 18 in number, $2 \times \frac{3}{4}$ inches Steel, with solid forged ends riveted to hub and tire Cleats, malleable iron riveted to face of wheel	VALVE MOTION Style of, link reverse Governor, Pickering Injector, Penberthy Pump, Crosshead Ejector, only when ordered Oil pump, Mason Kip
	BRASS FITTINGS Extra heavy, made expressly for Buffalo Pitts Company
	CRANK SHAFT Diameter $3\frac{1}{2}$ inches
	COUNTERSHAFT Diameter $3\frac{1}{2}$ inches

Specifications subject to change without notice

Specifications of 25 Horse Power Single Cylinder Traction Engine

BOILER Style, Universal Diameter 36 inches Fire box, height 46 inches Fire box, length 46 inches Fire box, width 31 inches Heating surface 283 sq. ft. Grate area 9.9 sq. ft. Tested at 225 lbs. hydrostatic pressure	VALVE MOTION Style of, link reverse or Woolf Governor, Pickering Injector, Penberthy Pump, Crosshead Ejector, only when ordered Oil pump, Mason Kip
CYLINDER Diameter 10 inches Stroke 12 inches	BRASS FITTINGS Extra heavy, made expressly for Buffalo Pitts Company
FLY WHEEL Diameter 46 inches Face $10\frac{1}{2}$ inches Revolutions per minute 250	COUNTERSHAFT Diameter 5 inches Specifications subject to change without notice.
TRACTION WHEELS Height 78 inches Width 24 inches Material. Built up of open hearth steel plate Spokes, 16 in number, $2\frac{1}{2} \times \frac{3}{4}$ inches Steel, with solid forged ends riveted to hub and tire Cleats, malleable iron riveted to face of wheel	
FRONT WHEELS Height 51 inches Width 12 inches Material, open hearth steel plate. Flat steel spokes riveted to rim and hub. Fitted with a steel band to prevent slipping Extreme width of engine over all 8 feet $7\frac{1}{2}$ inches Distance between front and rear axle 11 feet 6 inches	
GEARING Semi-steel, large diameter and wide face	
POWER Rated horse power 25 Brake horse power 75	
CRANK SHAFT Diameter $3\frac{1}{2}$ inches	

Specifications of the Buffalo Pitts 30 Horse Power Single Cylinder Traction Engine

BOILER Style, Universal Diameter 38 inches Fire box, height 47 inches Fire box, length 46 inches Fire box, width 33 inches Heating surface 320 sq. ft. Grate area 10.5 sq. ft. Tested at 225 lbs. hydrostatic pressure	Material, open hearth steel plate. Flat steel spokes riveted to rim and hub. Fitted with a steel band to prevent slipping Extreme width of engine over all 8 feet 10 inches Distance between front and rear axle 11 feet 6 inches
CYLINDER Diameter $11\frac{1}{4}$ inches Stroke 12 inches	GEARING Semi-steel. Large diameter and wide face
FLY WHEEL Diameter 46 inches Face $10\frac{1}{2}$ inches Revolutions per minute 250	POWER Rated horse power 30 Brake horse power 90
TRACTION WHEELS Height 78 inches Width 24 inches Material. Built up of open hearth steel plate Spokes, 16 in number, $2\frac{1}{2} \times \frac{3}{4}$ inches Steel, with solid forged ends riveted to hub and tire Cleats, malleable iron riveted to face of wheel	VALVE MOTION Style of, link reverse or Woolf Governor, Pickering Injector, Penberthy Pump, Crosshead Ejector, only when ordered Oil pump, Mason Kip
FRONT WHEELS Height 51 inches Width 12 inches	BRASS FITTINGS Extra heavy, made expressly for Buffalo Pitts Company
	CRANK SHAFT Diameter $3\frac{1}{2}$ inches
	COUNTERSHAFT Diameter 5 inches

Specifications subject to change without notice

All specifications on this page are for year 1909

Specifications of 14 Horse Power Double Cylinder Traction Engine

BOILER Style, Universal Diameter 30 inches Fire box, height 42 inches Fire box, length 44 inches Fire box, width 26 inches Tubes, number 39 Tubes, diameter 2 inches Tubes, length 72 inches Heating surface 170 sq. ft. Grate area 7.9 sq. ft. Tested at 225 lbs. hydrostatic pressure	FRONT WHEELS Height 45 inches Width 7 inches Material, open hearth steel plate. Flat steel spokes riveted to rim and hub. Fitted with a steel band to prevent slipping Extreme width of engine over all 7 feet 2 inches Distance between front and rear axle 8 feet 6 inches
CYLINDERS—Double Diameter 6 inches each Stroke 10 inches	GEARING Semi-steel, large diameter and wide face
FLY WHEEL Diameter 44 inches Face $9\frac{1}{2}$ inches Revolutions per minute 260	POWER Rated horse power 14 Brake horse power 42
TRACTION WHEELS Height 66 inches Width 16 inches Material. Built up of open hearth steel plate Spokes, 18 in number, $2 \times \frac{3}{4}$ inches Steel, with solid forged ends riveted to hub and tire Cleats, malleable iron riveted to face of wheel	VALVE MOTION Style of, link reverse Governor, Pickering Injector, Penberthy Pump, Independent steam Ejector, only when ordered Oil pump, Mason Kip
	BRASS FITTINGS Extra heavy, made expressly for Buffalo Pitts Company
	CRANK SHAFT Diameter $3\frac{1}{2}$ inches
	COUNTERSHAFT Diameter $3\frac{1}{2}$ inches

Specifications subject to change without notice

Specifications of 18 Horse Power Double Cylinder Traction Engine

BOILER Style, Universal Diameter 30 inches Fire box, height 42 inches Fire box, length 44 inches Fire box, width 26 inches Tubes, number 39 Tubes, diameter 2 inches Tubes, length 84 inches Heating surface 190 sq. ft. Grate area 7.9 sq. ft. Tested at 225 lbs. hydrostatic pressure	FRONT WHEELS Height 48 inches Width 9 inches Material, open hearth steel plate. Flat steel spokes riveted to rim and hub. Fitted with a steel band to prevent slipping Extreme width of engine over all 7 feet $5\frac{1}{2}$ inches Distance between front and rear axle 9 feet 6 inches
CYLINDERS—Double Diameter, $6\frac{1}{4}$ inches each Stroke, 10 inches	GEARING Semi-steel, large diameter and wide face
FLY WHEEL Diameter 44 inches Face $9\frac{1}{2}$ inches Revolutions per minute 260	POWER Rated horse power 18 Brake horse power 54
TRACTION WHEELS Height 66 inches Width 20 inches Material. Built up of open hearth steel plate Spokes, 18 in number, $2 \times \frac{3}{4}$ inches Steel, with solid forged ends riveted to hub and tire Cleats, malleable iron riveted to face of wheel	VALVE MOTION Style of, link reverse Governor, Pickering Injector, Penberthy Pump, Independent steam Ejector, only when ordered Oil pump, Mason Kip
	BRASS FITTINGS Extra heavy, made expressly for Buffalo Pitts Company
	CRANK SHAFT Diameter $3\frac{1}{2}$ inches
	COUNTERSHAFT Diameter $3\frac{1}{2}$ inches

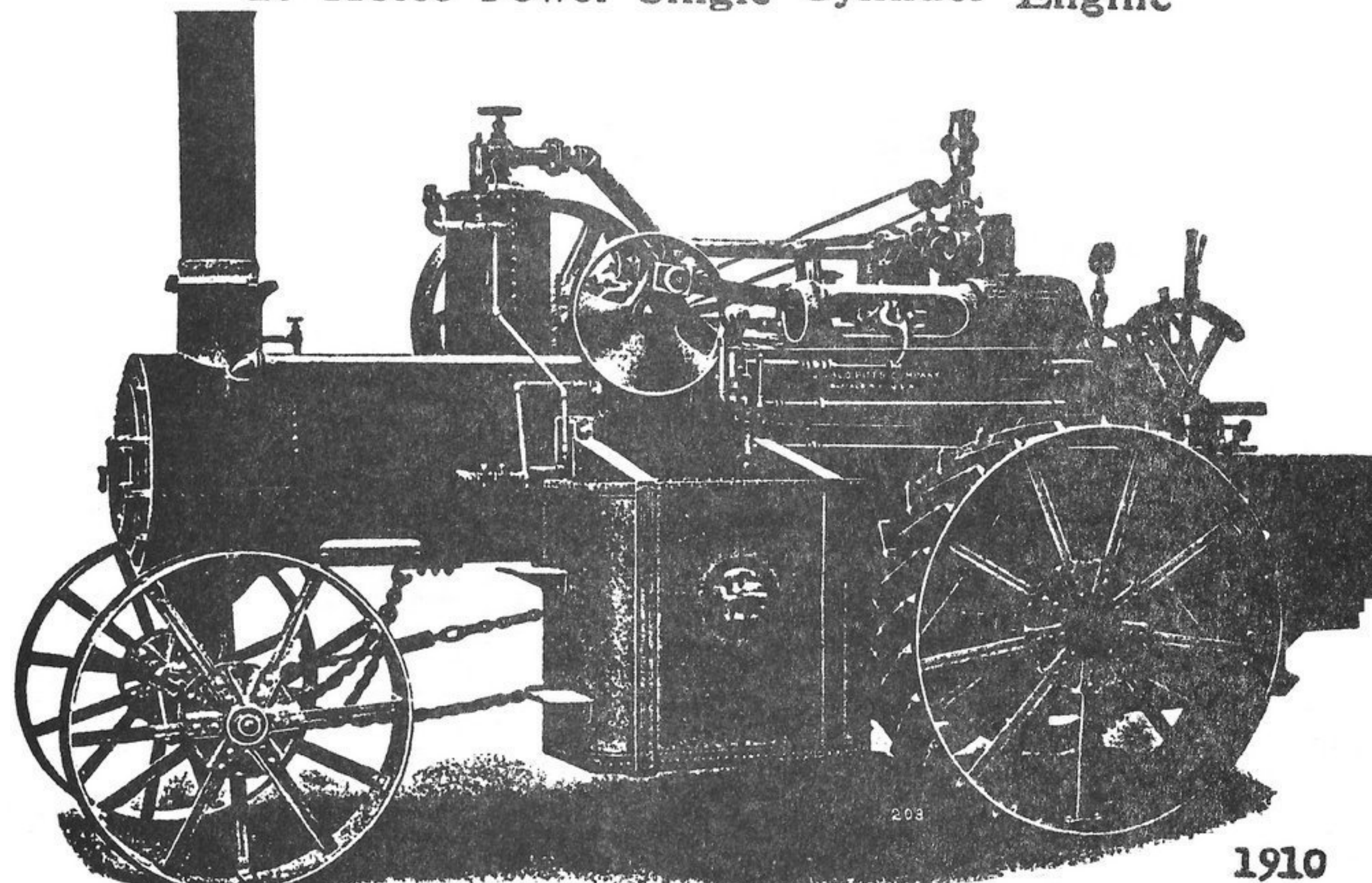
Specifications subject to change without notice.

Specifications of 35 Horse Power Double Cylinder Plow Engine

BOILER Style, Universal Diameter 40 inches Fire box, height 50 inches Fire box, length 48 inches Fire box, width 35 inches Tubes, number 52 Tubes, diameter $2\frac{1}{2}$ inches Tubes, length 102 inches Heating surface 365 sq. ft. Grate area 11.65 sq. ft. Tested at 225 lbs. hydrostatic pressure	FRONT WHEELS Height 51 inches Width 14 inches Material, open hearth steel plate. Flat steel spokes riveted to rim and hub. Fitted with a steel band to prevent slipping Extreme width of engine over all 10 feet $4\frac{1}{2}$ inches Distance between front and rear axle 11 feet 6 inches
CYLINDERS—Double Diameter $7\frac{1}{4}$ inches each Stroke 12 inches	GEARING Semi-steel, large diameter and wide face
FLY WHEEL Diameter 46 inches Face $10\frac{1}{2}$ inches Revolutions per minute 250	POWER Rated horse power 35 Brake horse power 90
TRACTION WHEELS Height 78 inches Width 32 inches Material. Built up of open hearth steel plate Spokes, 24 in number, $2\frac{1}{2} \times \frac{3}{4}$ inches Steel, with solid forged ends riveted to hub and tire Cleats, malleable iron riveted to face of wheel	VALVE MOTION Style, link reverse Governor, Pickering Injector, Penberthy Pump, Independent steam Burnham Type Oil pump, Mason Kip
	BRASS FITTINGS Extra heavy, made expressly for Buffalo Pitts Company
	CRANK SHAFT Diameter $3\frac{1}{2}$ inches
	COUNTERSHAFT Diameter 5 inches

Specifications subject to change without notice

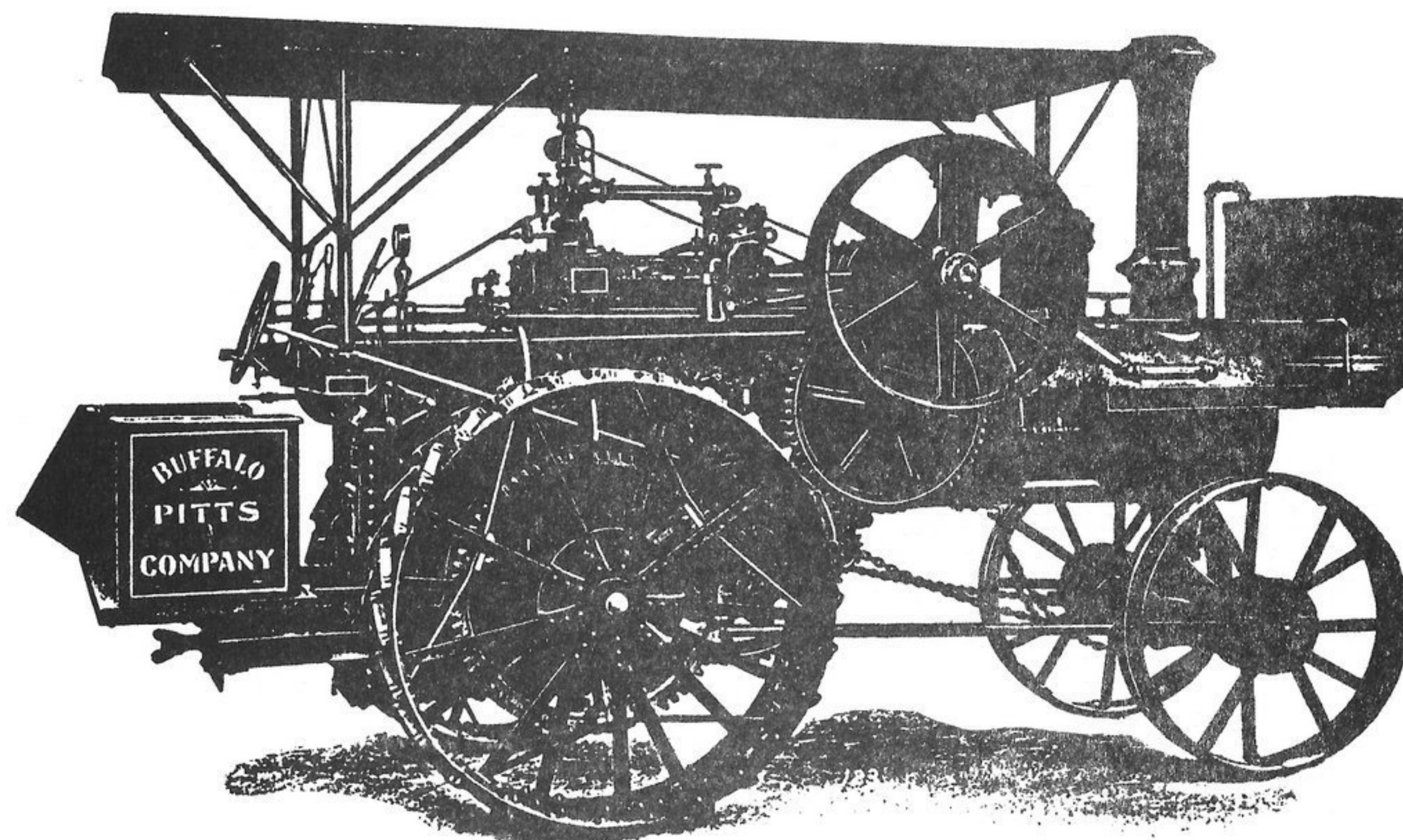
20 Horse Power Single Cylinder Engine



1910

Buffalo Pitts 20 horse power Single Cylinder Traction Engine. The strongest and best threshing engine on the market for the price. The most engine for the least money. Will run a large thresher complete with all attachments.

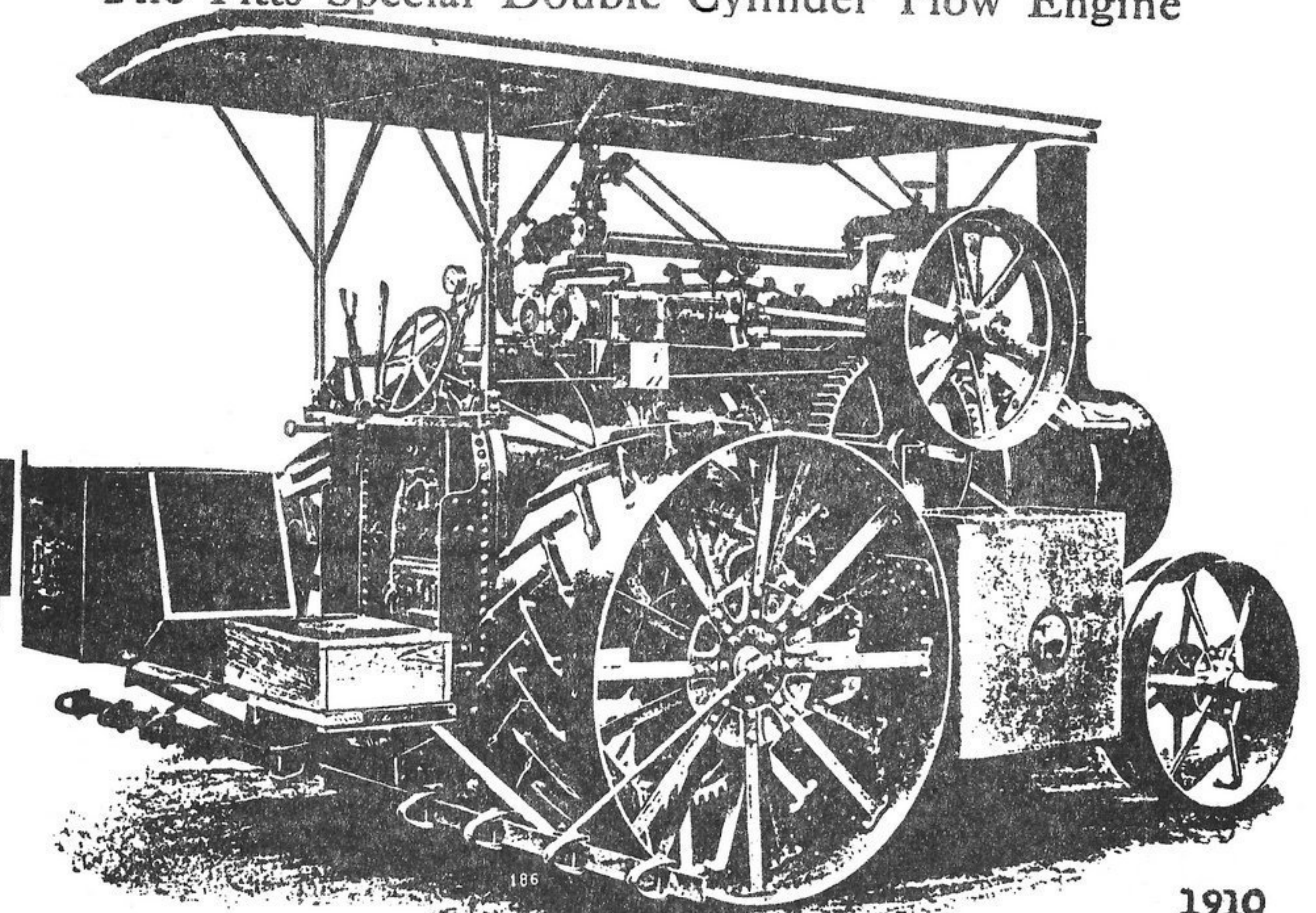
The Great General Purpose Engine



1910

Buffalo Pitts 18 horse Double Cylinder Traction Engine, suitable for threshing, hauling graders, running saw mills, etc. A model of perfection. Great in efficiency and durability.

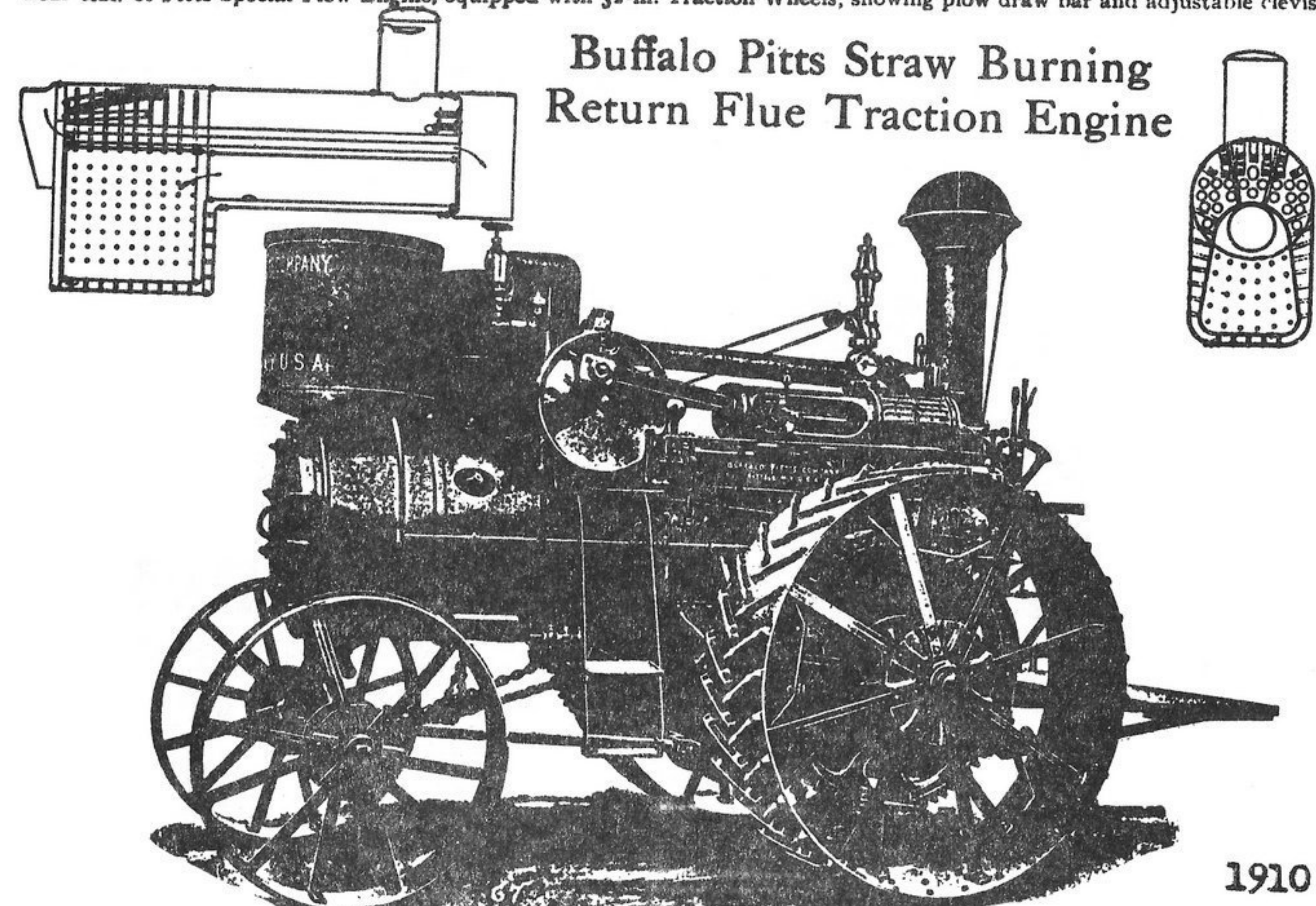
The Pitts Special Double Cylinder Plow Engine



1910

Rear view of Pitts Special Plow Engine, equipped with 32-in. Traction Wheels, showing plow draw bar and adjustable clevis

Buffalo Pitts Straw Burning Return Flue Traction Engine



1910

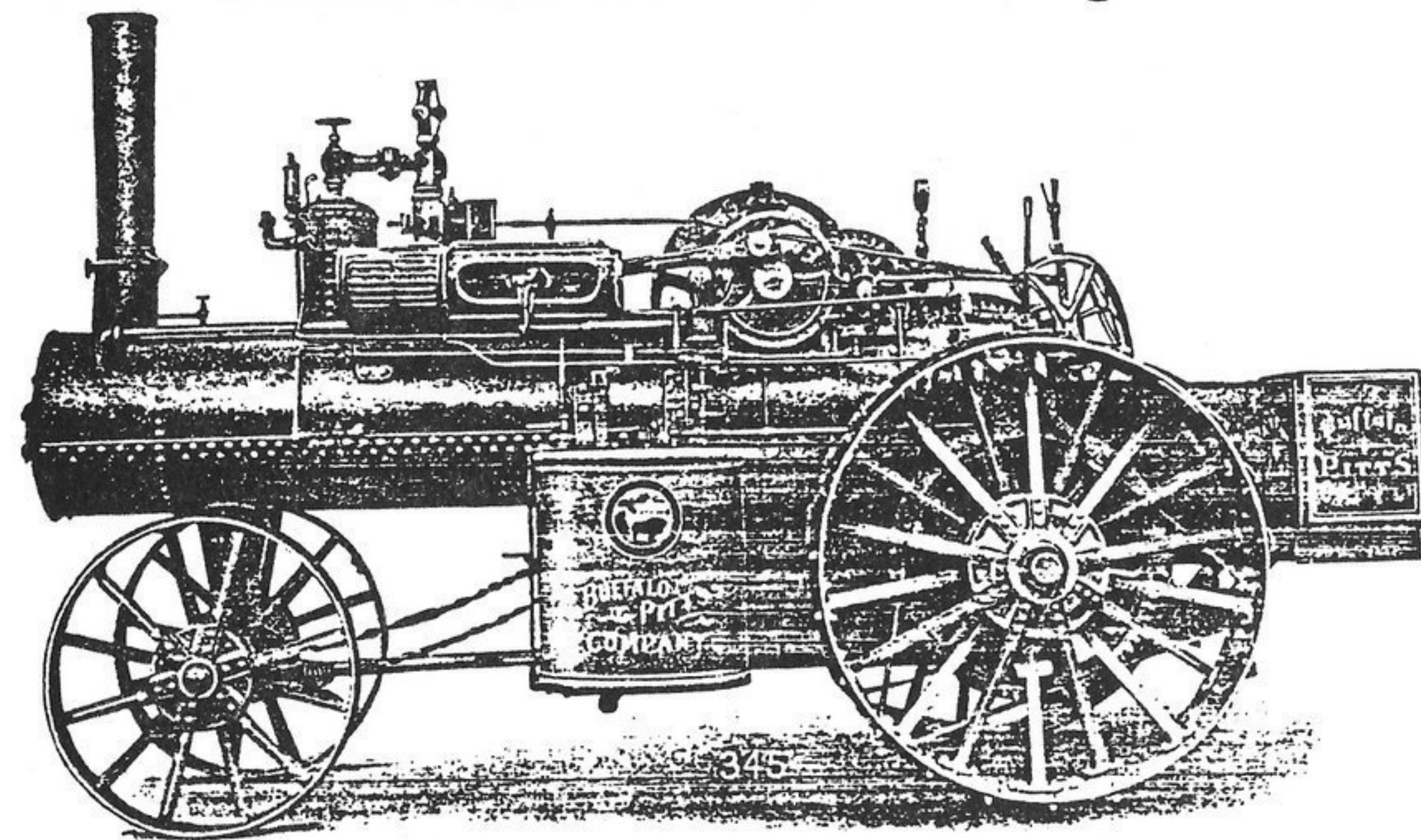
25 horse power Single Cylinder Engine on 37 1/2 inch Return Flue Boiler
DIMENSIONS: Cylinder, 10 x 12 in.; fire box, 36 in. high, 44 in. long, 30 in. wide at grate line; 21 tubes, 10 ft. 6 in. long, 3 in. diameter; grate area, 9.166 sq. ft.; heating surface, 232 sq. ft.; steam pressure, 140 lbs. per sq. in. Fly wheel, 46 in. diameter, 10 1/2 in. face, 250 revolutions per minute; rear wheels, 78 in. diameter, 24 in. face; front wheels, 51 in. diameter, 12 in. face. Distance between axles, 9 ft. 8 in.; extreme width of engine, 8 ft. 9 1/2 in.

THIS ENGINE WILL BURN STRAW, WOOD OR COAL

1910 BUFFALO PITTS ENGINES

WE NOW offer to our customers, Buffalo Pitts Traction Engines in both the double cylinder and single cylinder, side-mounted and rear-mounted models. Our side-mounted engines are built on the same lines as in the past few years, having all our latest improvements which enable us to offer an engine which has a perfect record as to service, economy and durability. Our rear-mounted engines are built on a special "Buffalo Pitts" design which we have used for many years in the construction of our road locomotive engines. This construction enables us to furnish an engine having no bolts connecting the traction part of the engine to the water part of the boiler.

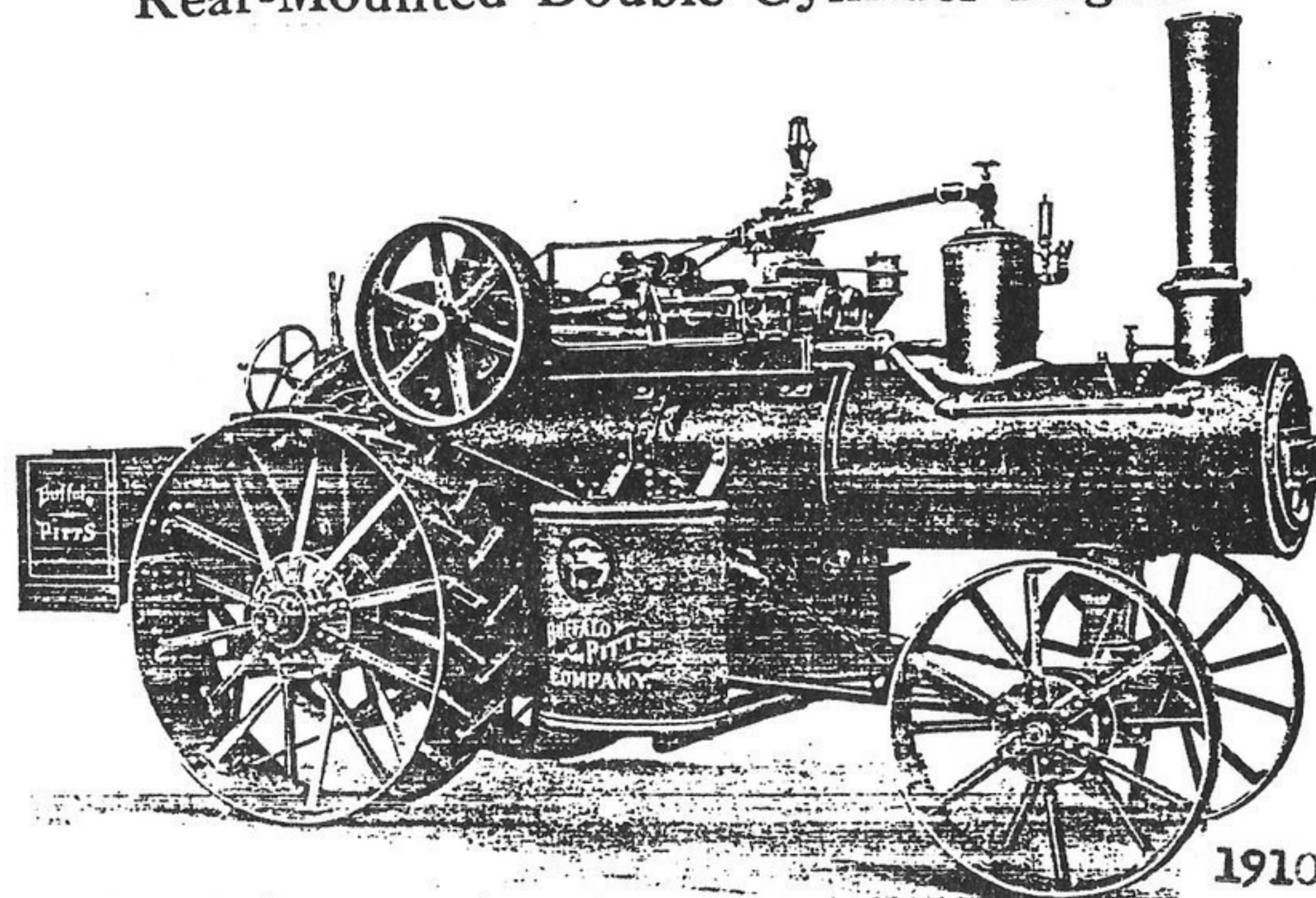
Buffalo Pitts Rear-Mounted Engine



1910

Illustration of 18 Horse Power Single Cylinder Engine

Rear-Mounted Double Cylinder Engine



1910

Buffalo Pitts 18 Horse Power Rear-Mounted Double Cylinder Traction Farm Engine

1910

SPECIFICATIONS FOR BUFFALO PITTS SIDE-MOUNTED SINGLE CYLINDER TRACTION ENGINES

Rated Horsepower		Class	Kind of Engine	FIRE BOX				BOILER				ENGINE DETAILS																
				Clearance of Firebox Above the Ground	Width in Inches	Height in Inches	Length in Inches	Grate Area in Sq. Ft.	FLUES		SHELL	DOME	CYL.	HAND WHEEL	REAR WHEEL	FRONT WHEEL	Extreme Width of Engine	Extreme Length of Engine	Extreme Height of Engine	Wheel Base	Diameter of Crankshaft	Diameter of Counterball	Diameter of Piston	Diameter of Rod				
									Face in Inches	Diameter in Inches																		
																									Face in Inches	Diameter in Inches		
10	Sgl.	Tract.	14	22	33	32	4.88	32	2	60 26	81	13	20	7	10	36	8 1/2	270	60	12	42	5	70	203			115	86 2 1/2	11 1/2	3 1/2
16	"	"	16	26	42	44	7.9	39	2	72 30	93 1/4	14	22 1/2	8 1/2	10	41	9 1/2	260	66	16	45	7	82	219	129	102 2 3/4	13 1/2	3 1/2
18	"	"	16	26	42	44	7.9	39	2	84 30	105 1/4	14	22 1/2	8 1/2	12	41	9 1/2	260	66	20	48	9	88 1/2	231	129	114 3 1/4	14 1/2	3 1/2
25	"	"	19	31	46	46	9.9	39	2 1/2	102 35 1/2	125 1/4	18	29	10	12	46	10 1/2	250	78	24	51	12	103 1/2	255	136	138 3 1/2	15	5
30	"	"	19	33	47	46	10.5	45	2 1/2	102 38	125 1/4	18	29	11 1/4	12	46	10 1/2	250	78	24	51	12	106	255	136	138 3 1/2	15	5

SPECIFICATIONS FOR BUFFALO PITTS REAR-MOUNTED SINGLE CYLINDER TRACTION ENGINES

18	Sgl.	Tract.	19	25 1/2	42	44	7.9	39	2	84 30	102 3/4	14	22 1/2	8 1/2	12	40	10	270	72	20	48	9	95	226	133	132 3 1/4	14 1/2	4 1/2
20	"	"	16	29	45	44	9.0	34	2 1/2	90 33	108 3/4	16	26	9	12	40	10	270	72	20	48	9	98	231	135	133 3 1/4	14 1/2	4 1/2
25	"	"	19	30 1/2	46	46	9.9	39	2 1/2	102 35 1/2	125 1/4	18	26	9 1/4	12	40	10	270	78	24	51	12	108	255	136	138 3 1/2	15	5 1/2

SPECIFICATIONS FOR BUFFALO PITTS SIDE-MOUNTED DOUBLE CYLINDER TRACTION ENGINES

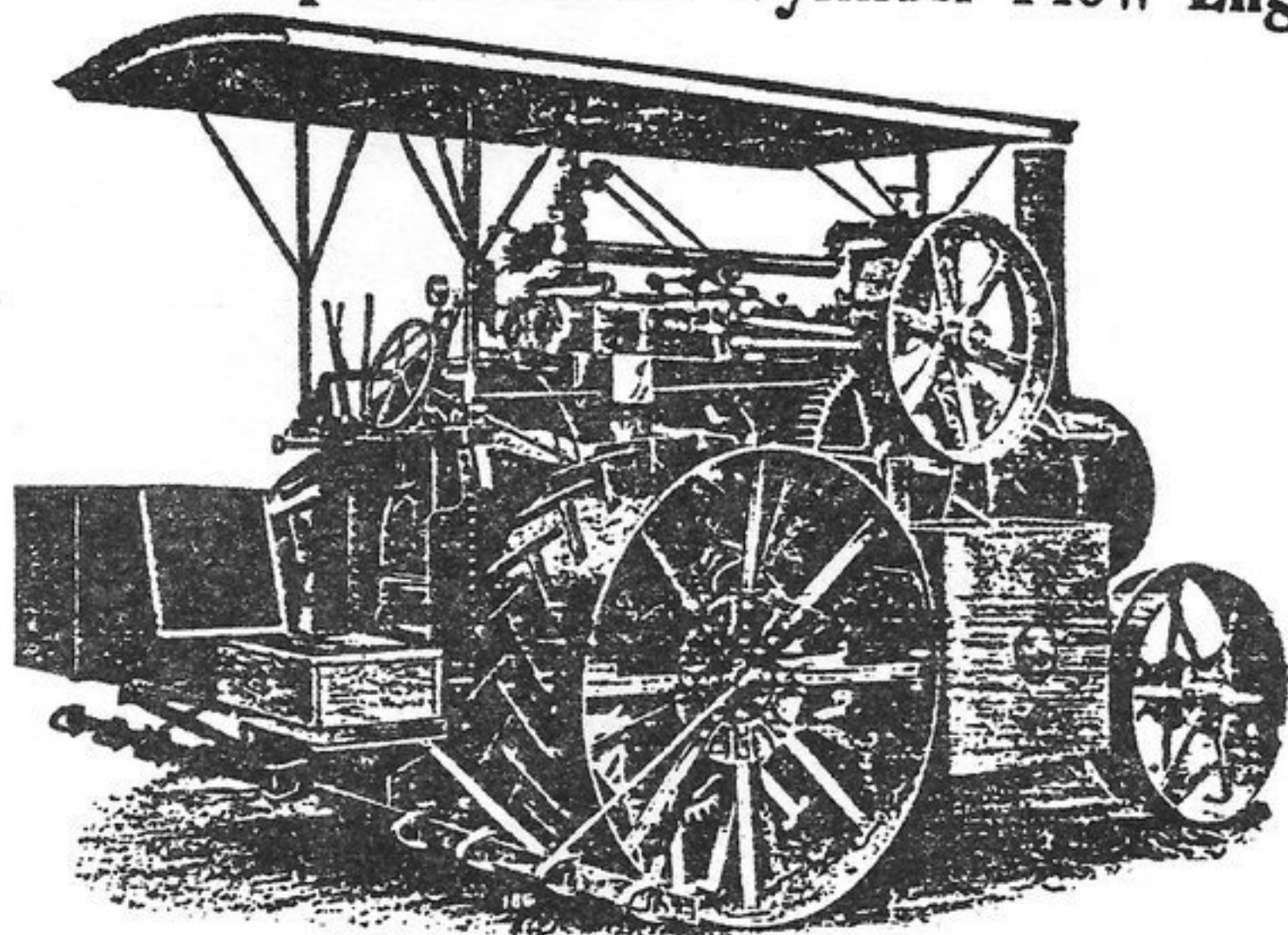
14	Dbl.	Tract.	16	26	42	44	7.9	39	2	72 30	93 1/4	14	22 1/2	6	10	44	9 1/2	260	66	16	45	7	82	219	129	102 3 1/4	13 1/2	3 1/2
18	"	"	16	26	42	44	7.9	39	2	84 30	105 1/4	14	22 1/2	6 1/4	10	41	9 1/2	260	66	20	48	9	88 1/2	231	129	114 3 1/4	14 1/2	3 1/2
22	"	"	16	29	45	44	9.0	34	2 1/2	102 33	123 1/4	16	26	7	10	46	10 1/2	250	66	20	48	9	91 1/2	250	132	138 3 1/2	15	5 1/2
25	"	"	19	31	46	46	9.9	39	2 1/2	102 35 1/2	125 1/4	18	29	7	10	46	10 1/2	250	78	24	51	14	105	255	136	138 3 1/2	15	5
35	"	"	19	35	50	48	11.7	52	2 1/2	102 40	125 1/4	18	29	7 3/4	12	46	10 1/2	250	78	32	51	14	121 1/2	255	138	138 3 1/2	15	5

SPECIFICATIONS FOR BUFFALO PITTS REAR-MOUNTED DOUBLE CYLINDER TRACTION ENGINES

18	Dbl.	Tract.	19	25 1/2	42	44	7.9	39	2	84 30	102 3/4	14	22 1/2	6 1/4	10	40	10	270	72	20	48	9	95	226	133	132 3 1/4	14 1/2	4 1/2
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SPECIFICATIONS FOR PORTABLE ENGINES AND BOILERS ARE THE SAME AS FOR TRACTION ENGINES AND BOILERS

The Pitts Special Double Cylinder Plow Engine



The One Plow Engine Which is a Success

This engine as well as all Buffalo Pitts Engines can be fitted with The Buffalo Pitts Hydro-Carbon Furnace for burning crude petroleum. This oil burning attachment has been used for several years on our engines in the southwest. The Southern Pacific and several other large railroads in the south use this burner on their locomotives. You can save money by using a Buffalo Pitts Engine equipped with this attachment. Ask us about it.

1911



The Buffalo Pitts Boiler

The boiler is the vital part of every engine. In Buffalo Pitts Boilers you have Perfection. They are High Pressure—have a sloping crown sheet which will hold water on a steep incline. A Water bottom which gives a large receptacle for mud below the grate line. These Boilers cost more than the open bottom kind and are worth double. The boiler sheet forms the fire door, eliminating the wrought iron ring which will break on account of difference in expansion. You are safe in buying the Pitts Boiler.

Foran, N. D.
Minneapolis, Minn.
Wichita, Kansas
Madison, Wisconsin
Burlington, North Carolina, Toledo, O.

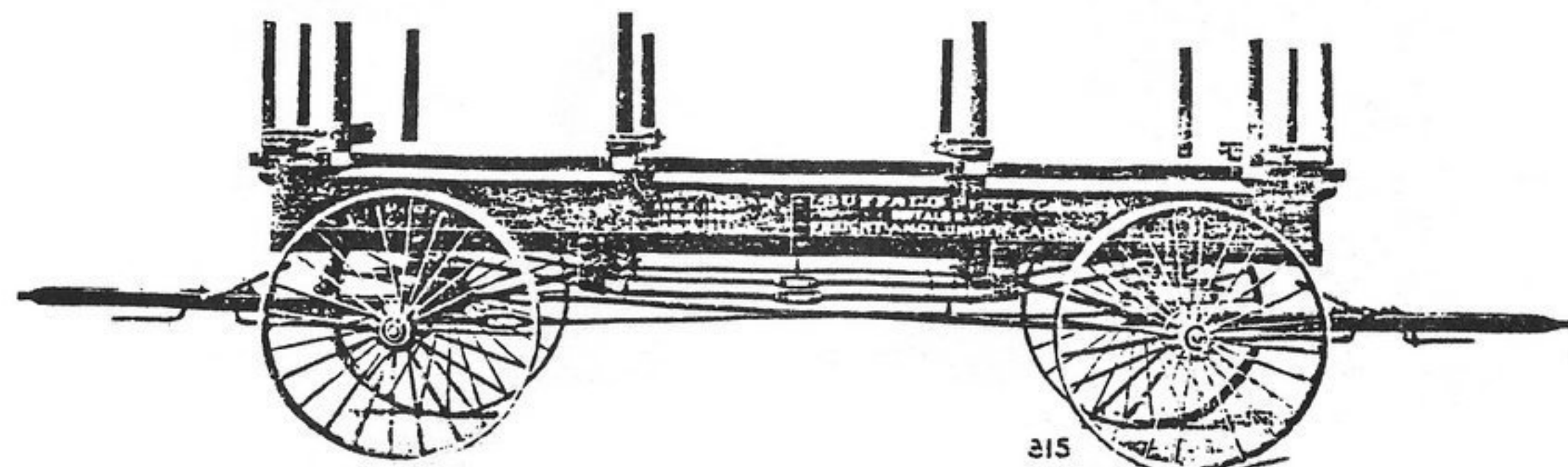
Buffalo Pitts Company

MAIN OFFICE
BUFFALO, NEW YORK
NO. 2 CAROLINA ST.

Houston, Texas
Lincoln, Nebraska
Billings, Montana
Los Angeles, Cal.
Elko, Idaho & Englewood, Colo.

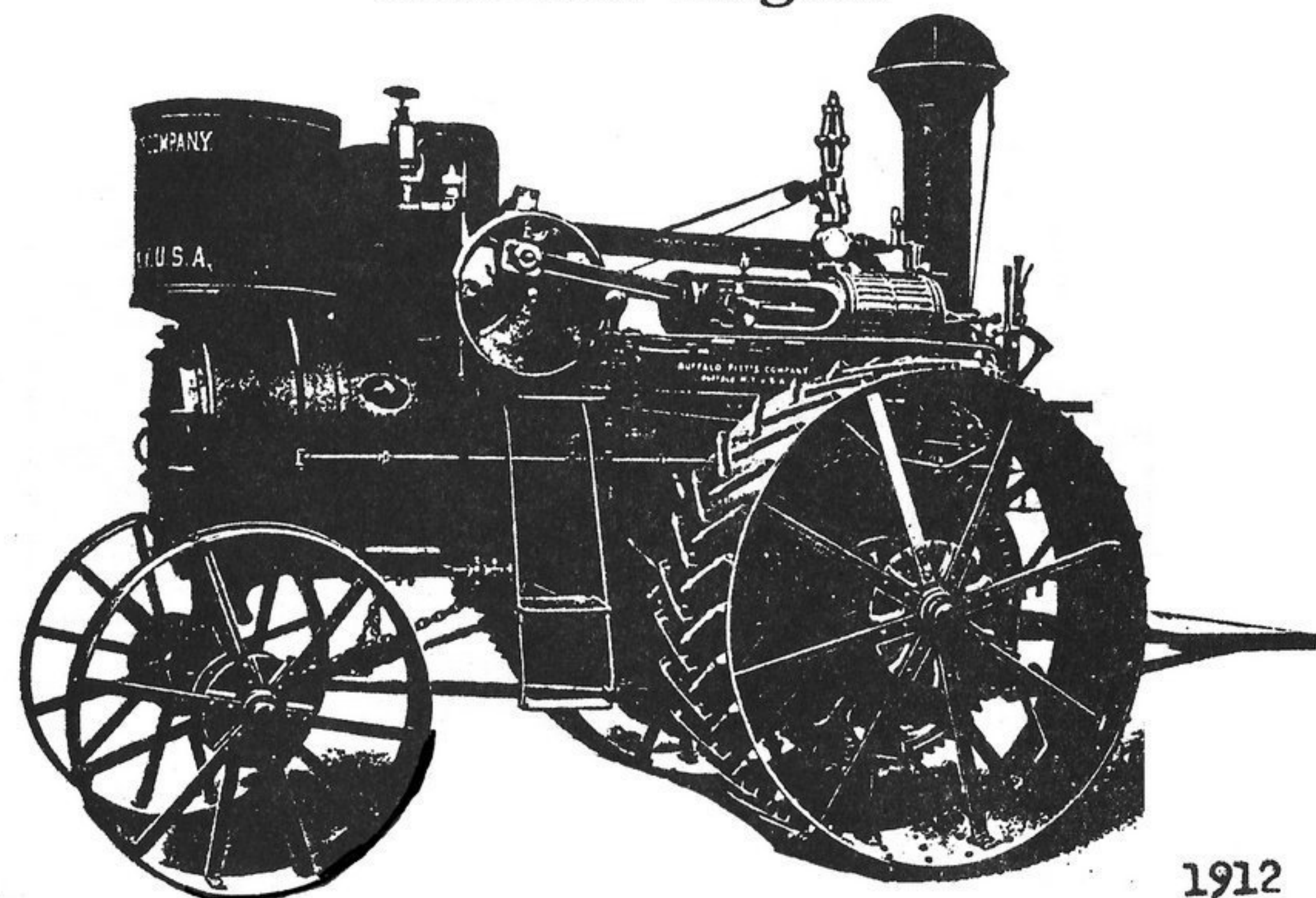
1910 The Buffalo Pitts 5-Ton Trailer with Extension Body

For hauling all kinds of material. Special bodies made to order for hauling grain and general farm products.



For use with Traction Engines, Motor Trucks or Teams. Equipped with Cross Reach Attachment, Reversing Attachment, Steering Attachment, Bronze Bushings in Hubs of Wheels.

Buffalo Pitts Straw Burning Return Flue Traction Engine

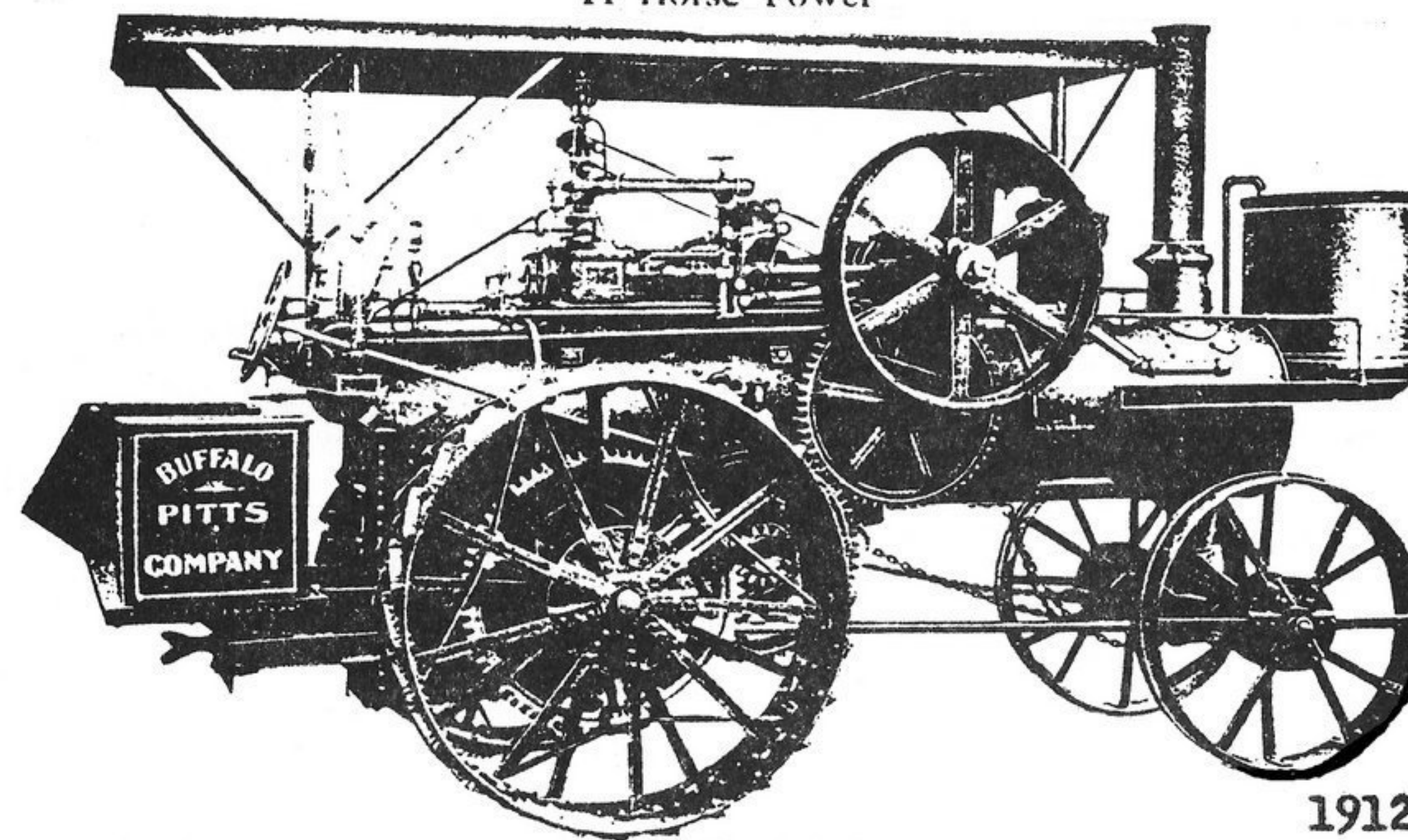


25 horse power Single Cylinder Engine, on 37½ inch Return Flue Boiler.

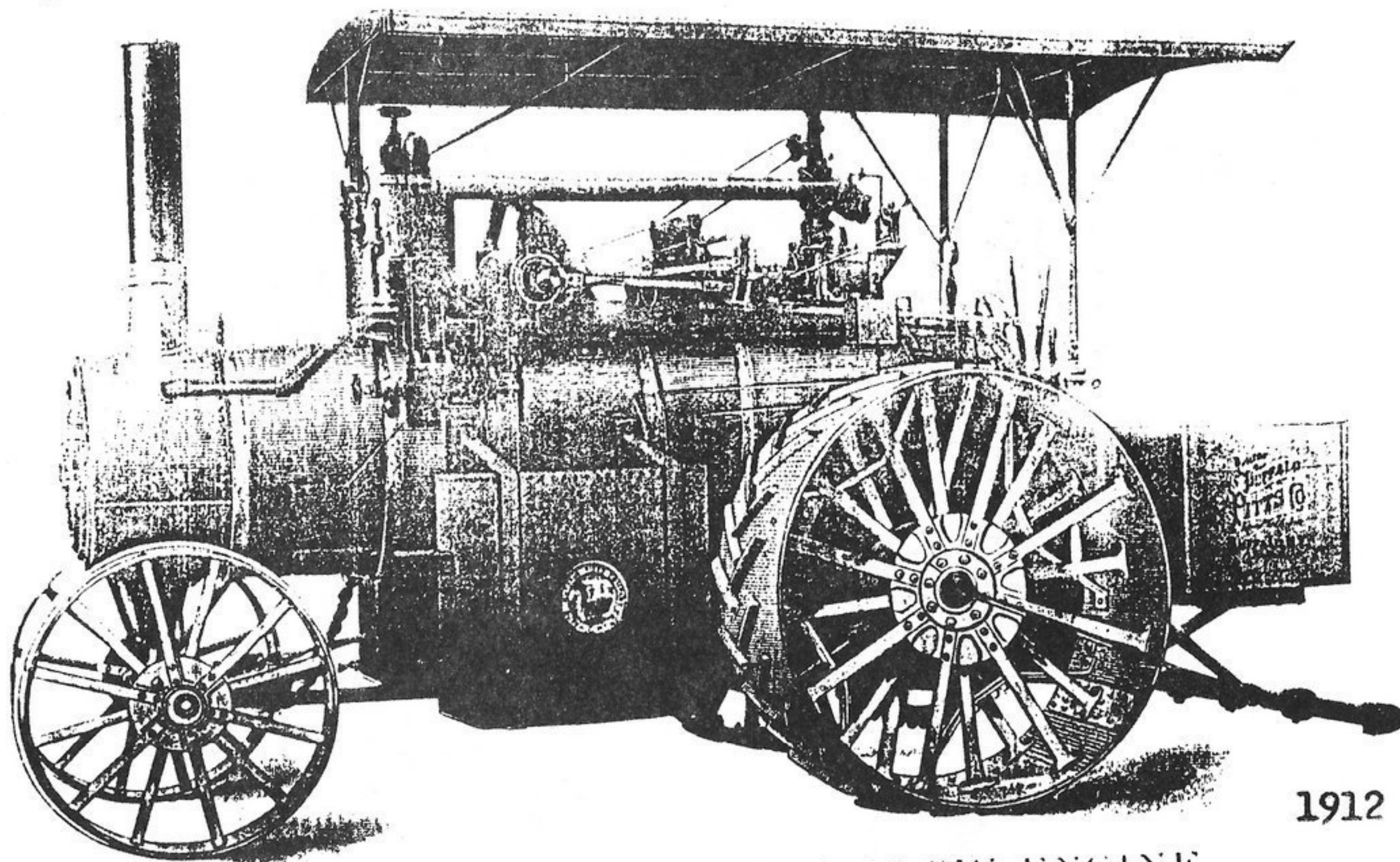
DIMENSIONS: Cylinder, 10 x 12 in.; fire box, 36 in. high, 44 in. long, 30 in. wide at grate line; 21 tubes, 10 ft. 6 in. long, 3 in. diameter; grate area, 9.166 sq. ft.; heating surface, 232 sq. ft.; steam pressure, 140 lbs. per sq. in. Fly wheel, 46 in. diameter, 10½ in. face, 250 revolutions per minute; rear wheels, 78 in. diameter, 24 in. face; front wheels, 51 in. diameter, 12 in. face. Distance between axles, 9 ft. 8 in.; extreme width of engine, 8 ft. 9½ in.

Buffalo Pitts Double Cylinder Traction Engine

14 Horse Power



This engine has ample power for running a medium size thresher with wind stacker feeder and weigher. It is also good for any kind of traction work, having extra heavy gearing and shafting.



THE BUFFALO PITTS SPECIAL PLOW ENGINE

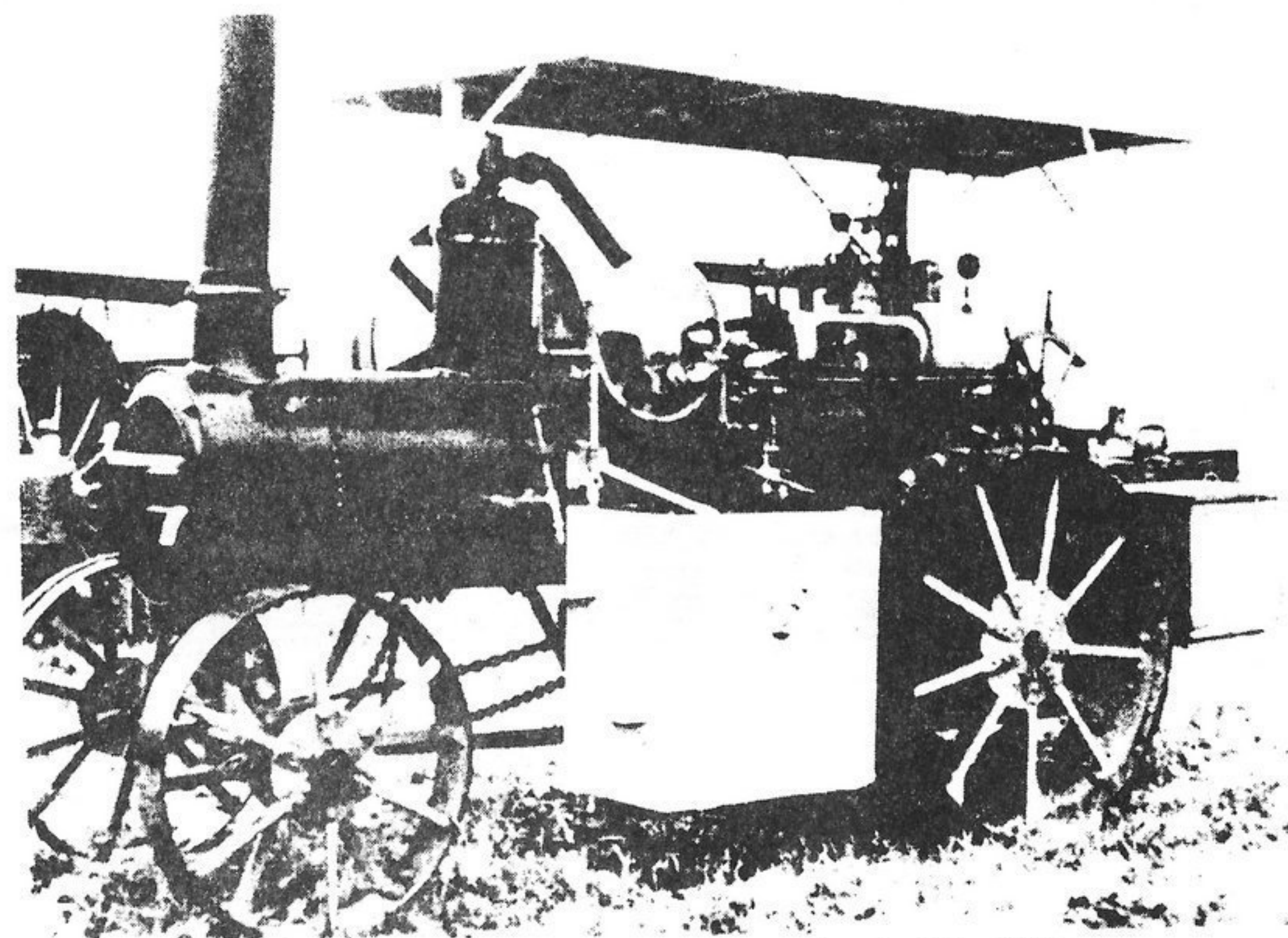
1912

1912 Specifications for Buffalo Pitts Engines—Single Cylinder Type

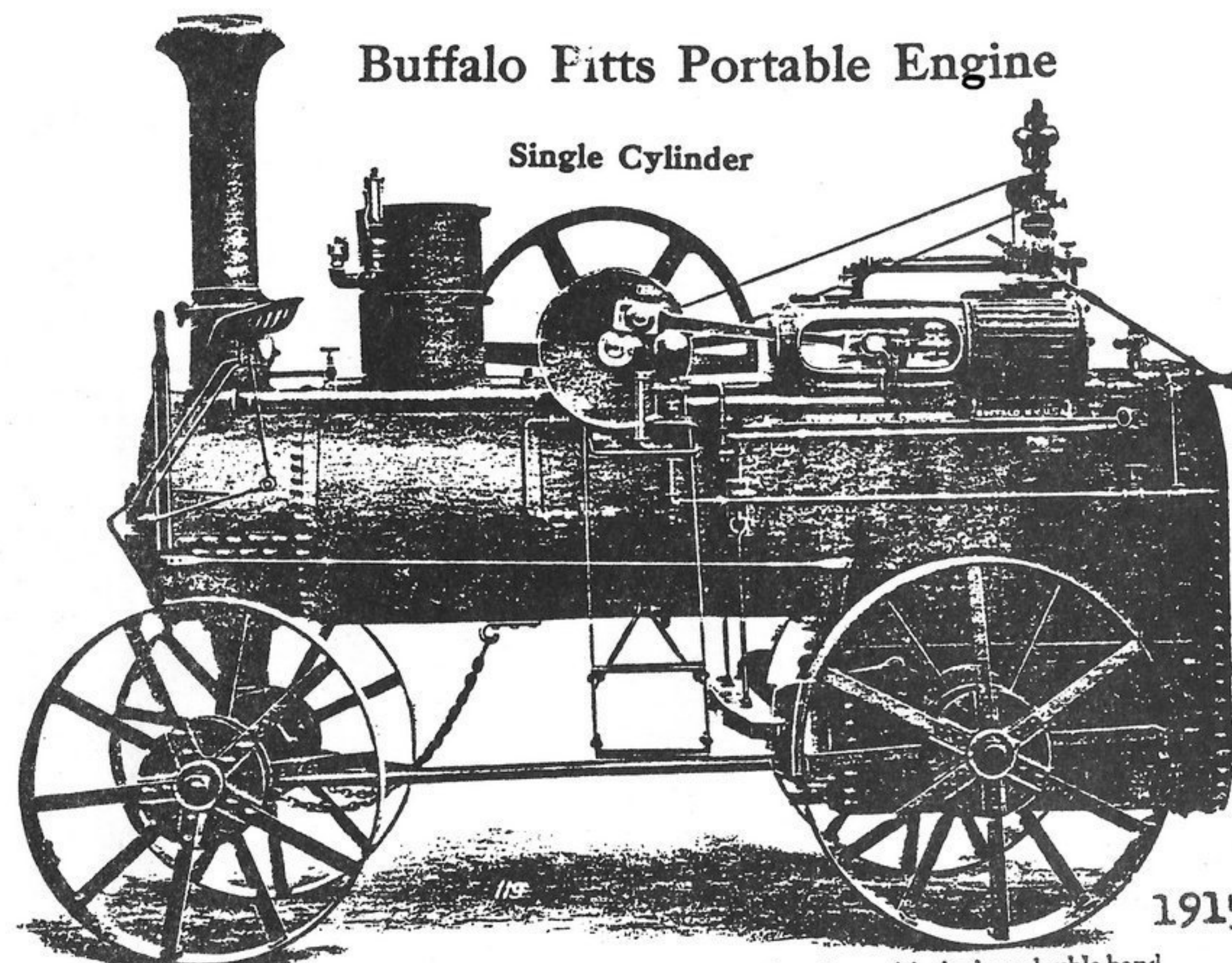
Rated Horse Power	Class	Kind of Engine	FIRE BOX			BOILER						ENGINE DETAILS																		
			Width in Inches	Height in Inches	Length in Inches	Grate Area in sq. ft.	FLUES		SHELL		DOVE	CYL.	BAND WHEEL	REAR WHEEL	FRONT WHEEL	Extreme Width of Engine	Extreme Length of Engine	Extreme Height of Engine	Wheel Base	Diameter of Crank Shaft	Diameter of Counter Shaft	Clearance of 1 Box	sq. ft.							
							Number	Diameter in Inches	Length in Inches	Diameter in Inches																				
10	SGL.	Portable	22	33	37½	5.7	32	2	60	26	81	13	20	7	10	36	8½	270	45	6	42	5	61	134	112	83	2½	2½	11	1
15	"	"	25	42½	44½	7.5	39	2	72	30	89	14	20½	8½	10	44	9½	260	48	8	45	6	67	155	124	104	2½	3½	11½	1
18	"	"	25	42½	44½	7.5	39	2	72	30	89	14	20½	8½	12	44	9½	260	48	8	45	6	67	155	124	104	3½	3½	11½	1
20	"	"	29	45	44	9.0	34	2½	102	33	123½	16	26	9½	12	46	10½	250	62	12	48	8	75	162	126	120	3½	3½	12	1
10	SGL.	Traction	22	33	32	4.88	32	2	60	26	81	13	20	7	10	36	8½	270	60	12	42	5	70	203	115	86	2½	2½	14	1
15	"	"	26	42	44	7.9	39	2	72	30	93½	14	22½	8½	10	44	9½	260	66	16	45	7	82	219	129	102	2½	3½	16	1
18	"	"	26	42	44	7.9	39	2	84	30	105½	14	22½	8½	12	44	9½	260	66	20	48	9	88½	231	129	114	3½	3½	6	1
20	"	"	29	45	44	9.0	34	2½	102	33	123½	16	26	9½	12	46	10½	250	66	20	48	9	94	250	132	133	3½	3½	6	2
25	"	"	31	46	46	9.9	39	2½	102	35½	125½	18	29	10	12	46	10½	250	78	24	51	12	103½	255	136	138	3½	5	19	2
30	"	"	33	47	46	10.5	45	2½	102	38	125½	18	29	11½	12	46	10½	250	78	24	51	12	106	255	136	138	3½	5	19	3

Specifications for Buffalo Pitts Engines—Double Cylinder Type

14	DBL.	Portable	25	42	44½	7.5	39	2	72	30	89	14	20½	6	10	44	9½	260	48	8	45	6	67	155	124	104	3½	3½	11½	1
18	"	"	25	42	44½	7.5	39	2	72	30	89	14	20½	6	10	44	9½	260	48	8	45	6	67	155	124	104	3½	3½	11½	1
22	"	"	29	45	44	9.0	34	2½	102	33	123½	16	26	7	10	46	10½	250	62	12	48	8	75	162	126	120	3½	3½	14½	2
35	"	"	35	50	48	11.7	52	2½	102	40	125½	18	29	7½	12	46	10½	250	62	12	48	8	83	168	130	126	3½	3½	14½	3
14	DBL.	Traction	26	42	44	7.9	39	2	72	30	93½	14	22½	6	10	44	9½	260	66	16	45	7	82	219	129	102	3½	3½	16	1
18	"	"	26	42	44	7.9	39	2	84	30	105½	14	22½	6	10	44	9½	260	66	20	48	9	88½	231	129	114	3½	3½	16	1
22	"	"	29	45	44	9.0	34	2½	102	33	123½	16	26	7	10	46	10½	250	66	20	48	9	91½	250	132	138	3½	3½	16	2
25	"	"	31	46	46	9.9	39	2½	102	35½	125½	18	29	7	10	46	10½	250	78	24	51	14	105	255	136	138	3½	5	19	2
35	"	"	35	50	48	11.7	52	2½	102	40	125½	18	29	7½	12	46	10½	250	78	32	51	14	124½	255	138	138	3½	5	19	3
14	DBL.	Special Engine	26	42	44	7.9	39	2	72	30	93½	14	22½	6	10	44	9½	260	66	16	45	7	86	219	129	102	3½	3½	16	1
18	"	"	26	42	44	7.9	39	2	84	30	105½	14	20	6½	10	44	9½	260	66	20	48	9	89½	231	129	114	3½	3½	16	1
22	"	"	29	45	44	9.0	34	2½	102	33	125½	16	26	7	10	42	12	250	78	24	51	14	102	246	136	140	3½	5	19	2



20 H.P. Buffalo-Pitts steam traction engine, built in 1914,
This engine is a single cylinder rear reverse mount.

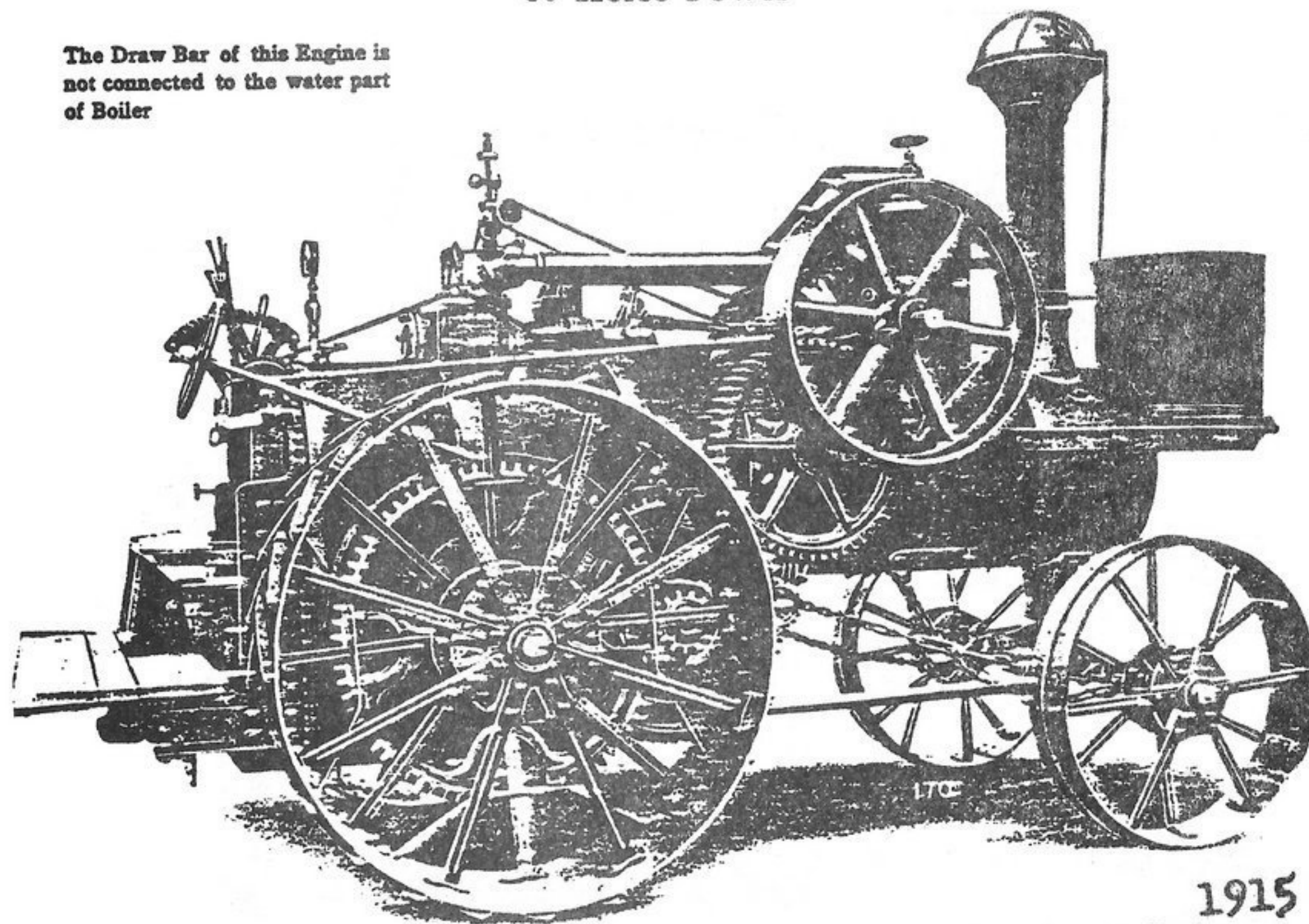


Double Cylinder Portable Engines are also built in all the traction sizes, with single or double band wheel. Single and Double Cylinder Skid Engines will be built to order, in all regular sizes.

Buffalo Pitts Single Cylinder Engine

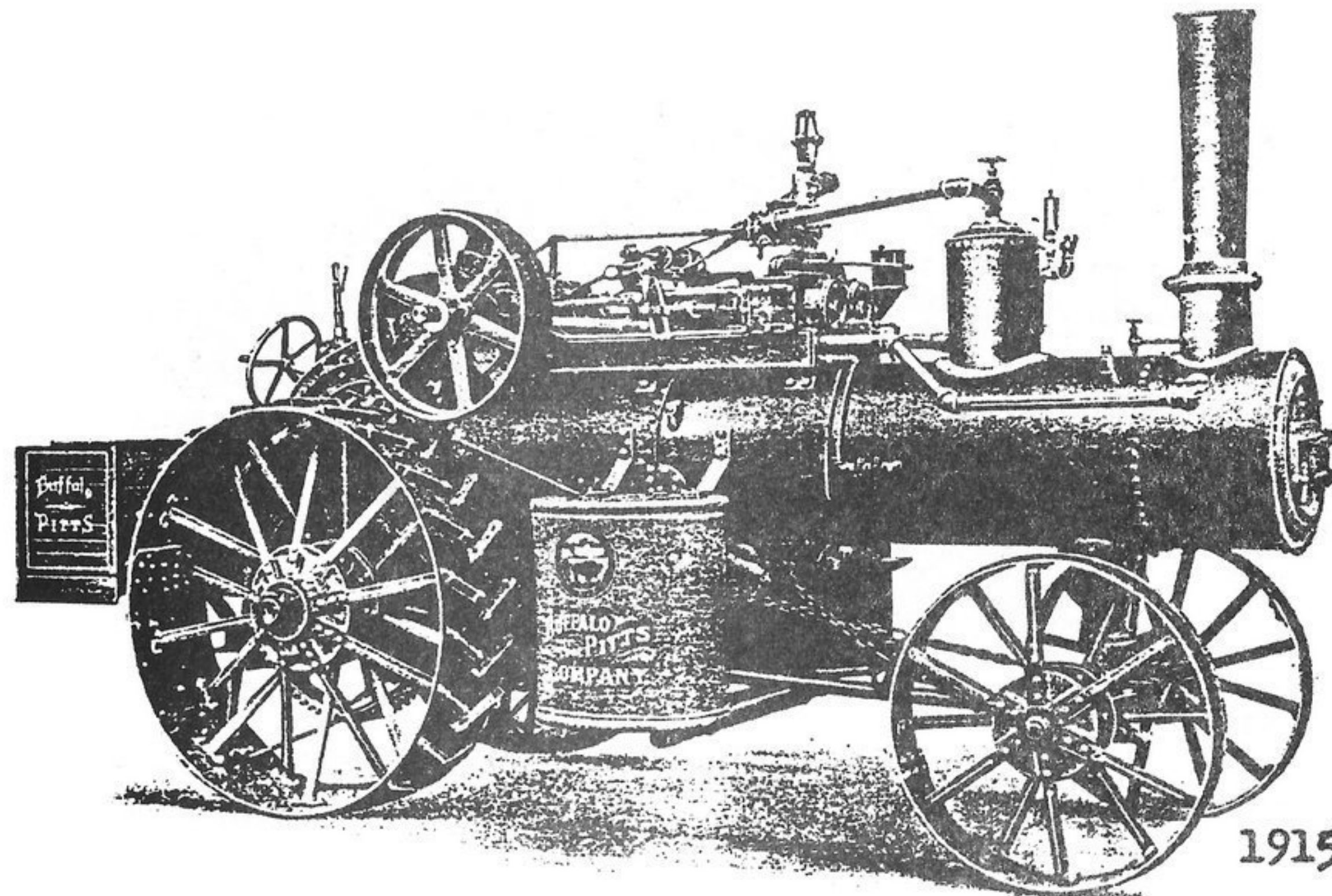
30 Horse Power

The Draw Bar of this Engine is not connected to the water part of Boiler



1915

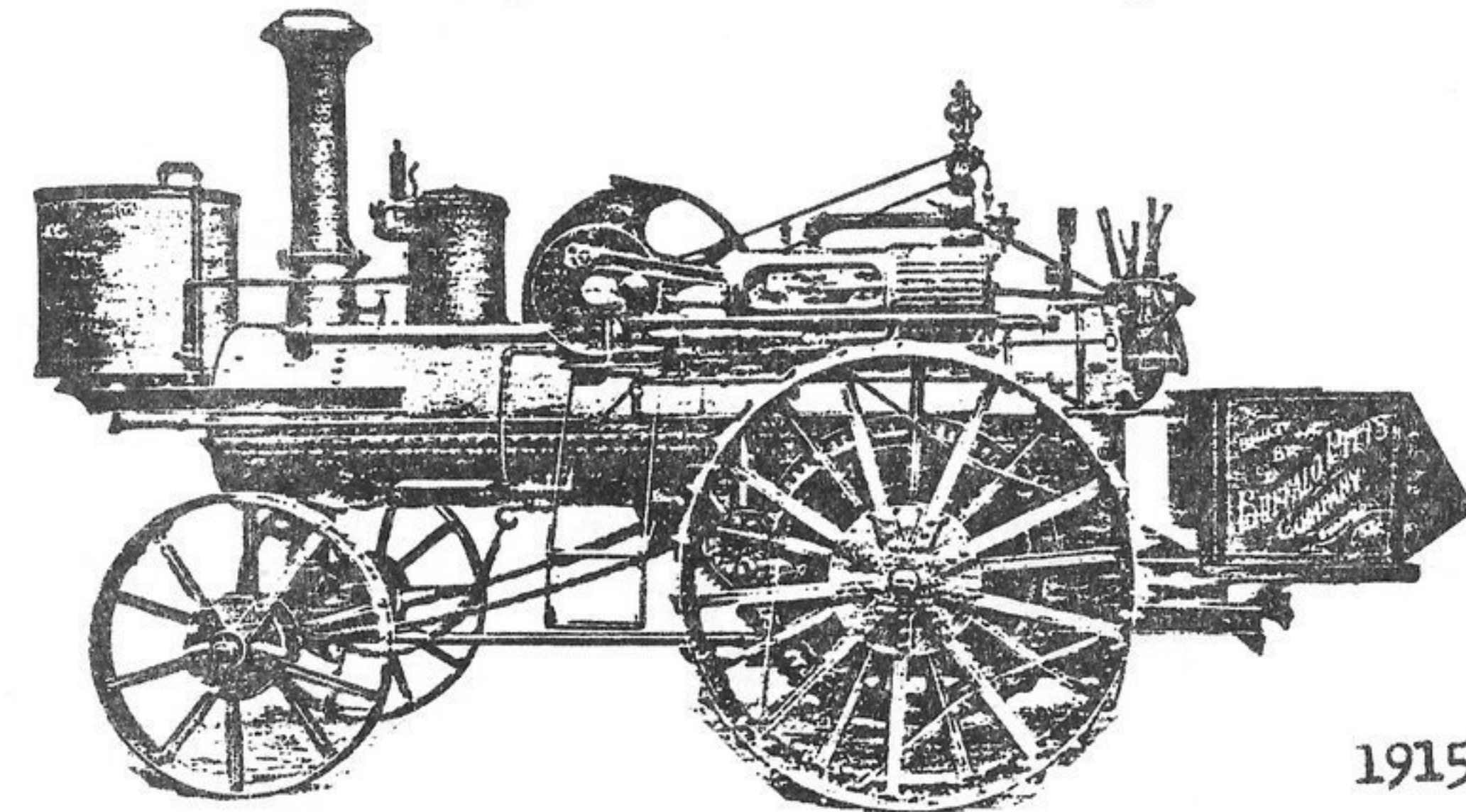
Buffalo Pitts 30 Horse Power Single Cylinder Traction Engine, shown with Straw Burning Equipment. Burns wood, coal, oil or straw. Built on the Universal Boiler. Has very heavy gearing. A strong, durable engine for the heaviest kind of threshing.



1915

Buffalo-Pitts 18 H.P. double cylinder rear-mounted engine.

Single Cylinder Traction Engine



1915

Illustration of the 15 and 18 Horse Power Single Cylinder, Side-Mounted Traction Engine. This is a high grade engine in every respect. The Buffalo Pitts Engines wear longer, are more economical and do better work than any other engine built. Our 10 Horse Power engines are built on practically the same lines as the 15 and 18 Horse Power.

1915

SPECIFICATIONS FOR BUFFALO PITTS SIDE-MOUNTED SINGLE CYLINDER TRACTION ENGINES

Horse Power of Road Locomotive Engines	ENGINE DETAILS																				Diameter of Rear Axle for Road Locomotive Engines																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
	Extreme Width of Engines	Extreme Length of Engines	Extreme Height of Engines	Wheel Base	Diameter of Crankshaft	Diameter of Coupling	Front Wheel	Rear Wheel	Band Wheel	Cyl.	Dome	Shell	Flues		FIRE BOX																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
													Number	Diameter in Inches	Length in Inches	Diameter in Inches	Length in Inches	Gross Area in Sq. Ft.	Height in Inches	Width in Inches		Clearance of Firebox Above the Ground	Kind of Engines	Class	Total Horsepower																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
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SPECIFICATIONS FOR BUFFALO PITTS REAR-MOUNTED SINGLE CYLINDER TRACTION ENGINES

18	Sgl.	Tract.	19	25 1/2	42	44	7.9	39	2	8430	102 1/2	14	22 1/2	8 1/2	12	40	10	270	72	20	48	9	95	226	133	1323	1/2	4 1/4
20	"	"	16	29	45	44	9.0	34	2 1/2	9033	108 1/2	16	26	9	12	40	10	270	72	20	48	9	98	231	135	1333	1/2	4 1/4
25	"	"	19	30 1/2	46	46	9.9	39	2 1/2	10235 1/2	125 1/2	18	26	9 1/2	12	40	10	270	78	24	51	12	108	255	136	1383	1/2	4 1/2

SPECIFICATIONS FOR BUFFALO PITTS SIDE-MOUNTED DOUBLE CYLINDER TRACTION ENGINES

14	Dbl.	Tract.	16	26	42	44	7.9	39	2	7230	93 1/2	14	22 1/2	6	10	44	9 1/2	280	66	16	45	7	82	219	129	1023	1/2	3 1/4
18	"	"	16	26	42	44	7.9	39	2	8430	105 1/2	14	22 1/2	6 1/2	10	44	9 1/2	260	66	20	48	9	88 1/2	231	129	1143	1/2	3 1/4
22	"	"	16	29	45	44	9.0	34	2 1/2	10233	123 1/2	16	26	7	10	46	10 1/2	250	66	20	48	9	91 1/2	250	132	1383	1/2	3 1/4
28	"	"	19	31	46	46	9.9	39	2 1/2	10235 1/2	125 1/2	18	29	7	10	46	10 1/2	250	78	24	51	14	105	255	136	1383	1/2	4 5/8
35	"	"	10	35	50	48	11.7	52	2 1/2	10240	125 1/2	18	29	7 1/2	12	46	10 1/2	250	78	32	51	14	124 1/2	255	138	1383	1/2	4 5/8

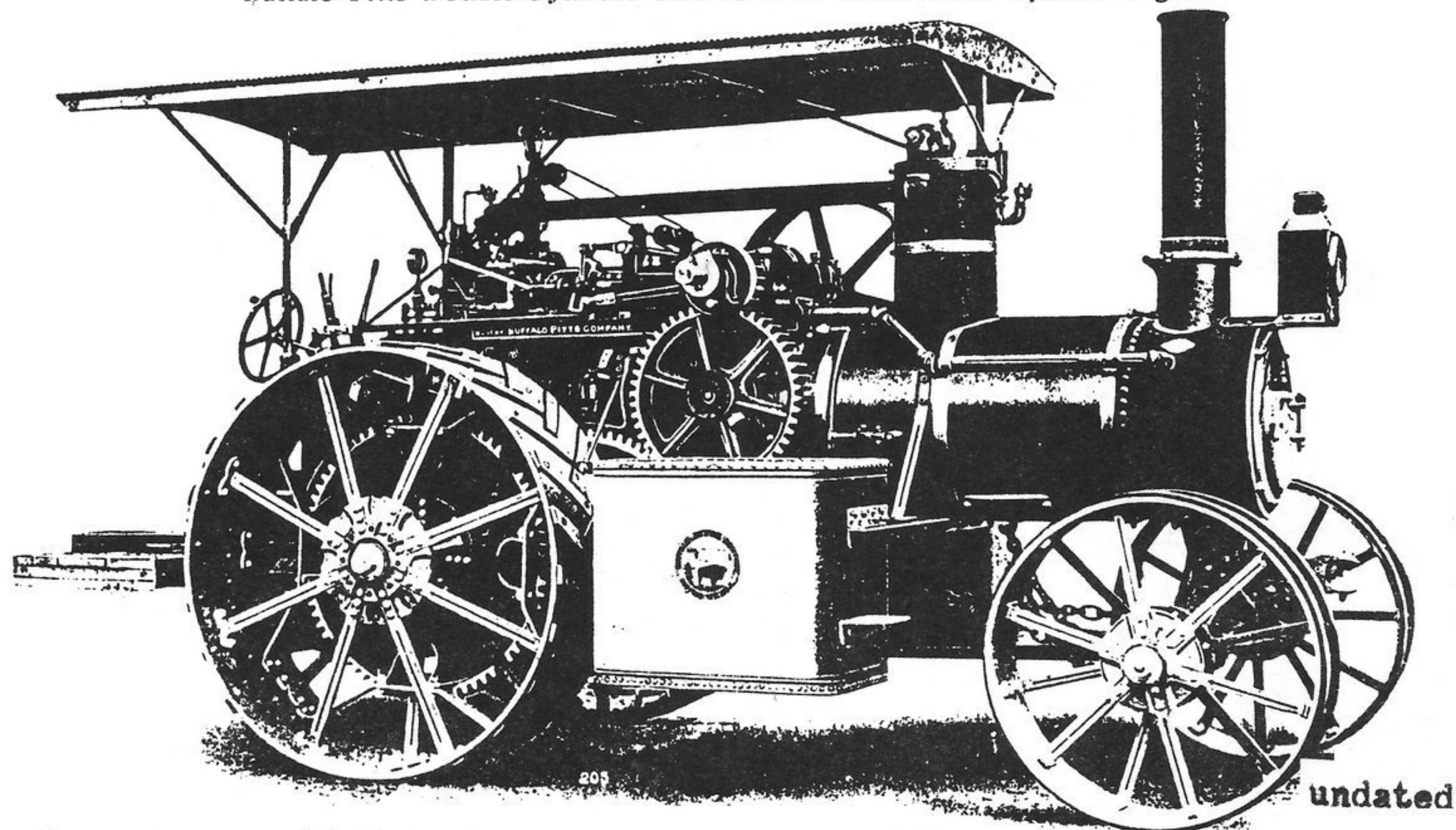
SPECIFICATIONS FOR BUFFALO PITTS REAR-MOUNTED DOUBLE CYLINDER TRACTION ENGINES

18	Dbl.	Tract.	19	25 1/2	42	44	7.9	39	2	8430	102 1/2	14	22 1/2	6 1/2	10	40	10	270	72	20	48	9	95	226	133	1323	1/2	4 1/4
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SPECIFICATIONS FOR PORTABLE ENGINES AND BOILERS ARE THE SAME AS FOR TRACTION ENGINES AND BOILERS

ROAD ENGINES AND ROAD CARS

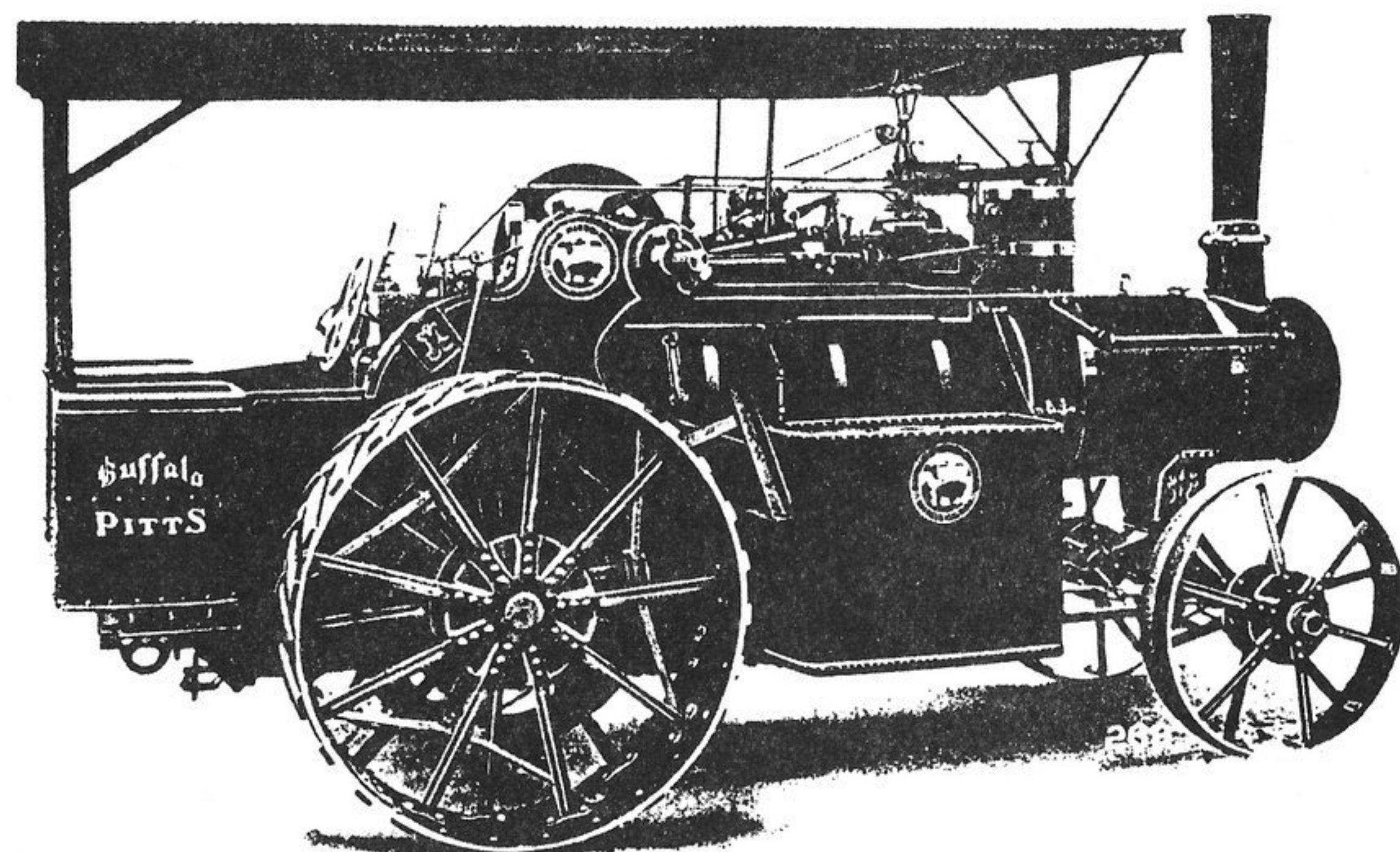
Buffalo Pitts Double-Cylinder Steel Geared Contractors' Special Engine



The above cut illustrates our Contractors' Special Engine which we build in two sizes, viz.: 18 and 22-Horsepower. The illustration shows 22-Horsepower size. The 18-Horsepower size has the same construction, with the exception of the tanks which are placed in front and on the platform, instead of on the side of the boiler. The engine has a shorter wheel base than the locomotive type, and is desirable for use in gravel pits, quarries, filtration plants and where turning space is limited. This is a thoroughly reliable and efficient engine.

The New Buffalo Pitts Double Cylinder Steel Geared Special Contractors' Road Locomotive

Brake Horsepower, 70 ; Rated Horsepower, 20. Two Road Speeds

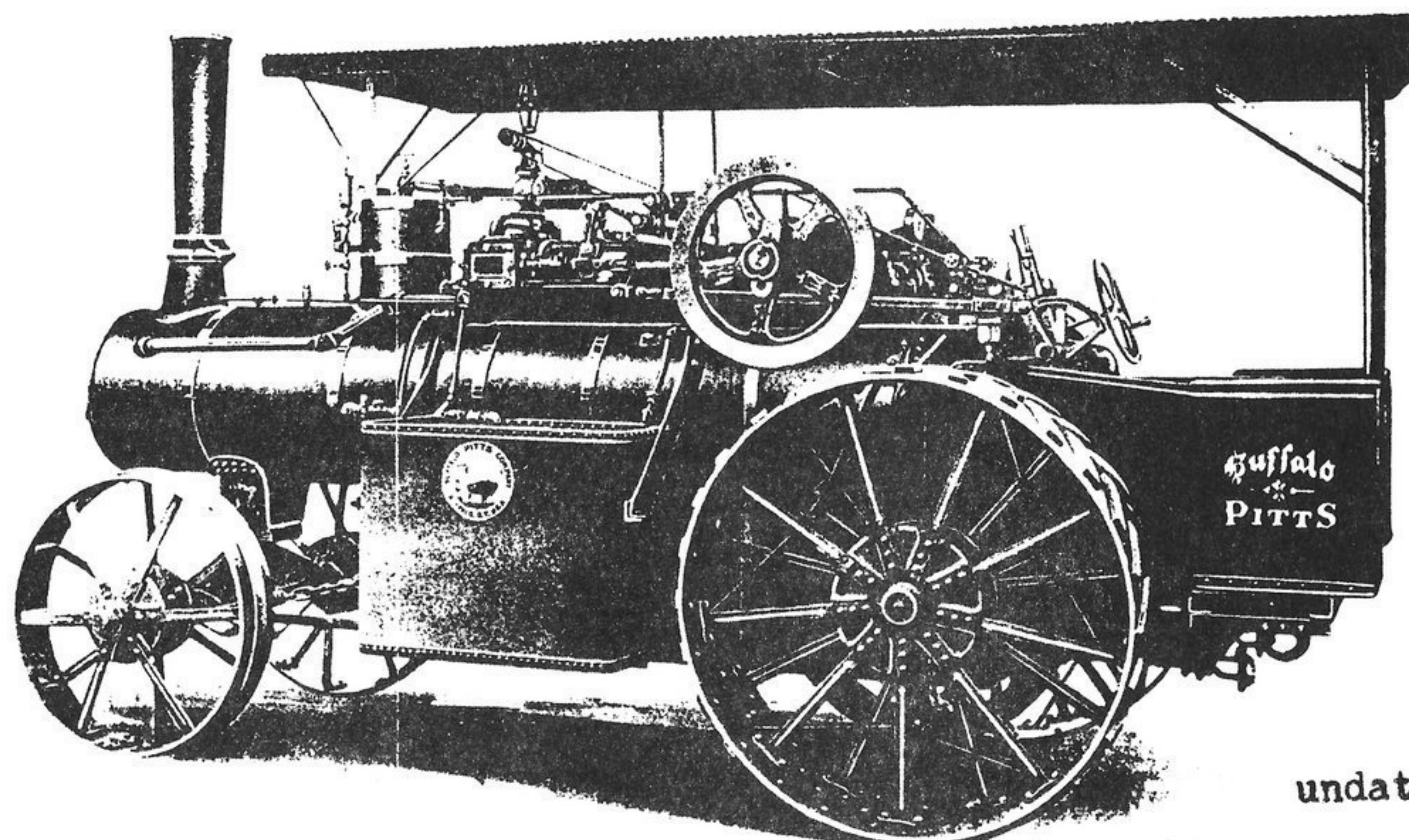


undated

The above illustration shows our new type of 20-70 Contractors' Special Road Locomotive complete and ready for the road. This engine is especially adapted for use with our new reversible stone spreading car, 3 1/2-yard size. By using a very high pressure boiler we give more power with the weight than is found in any other type of engine.

The New Buffalo Pitts Double Cylinder Steel Geared Special Contractors' Road Locomotive

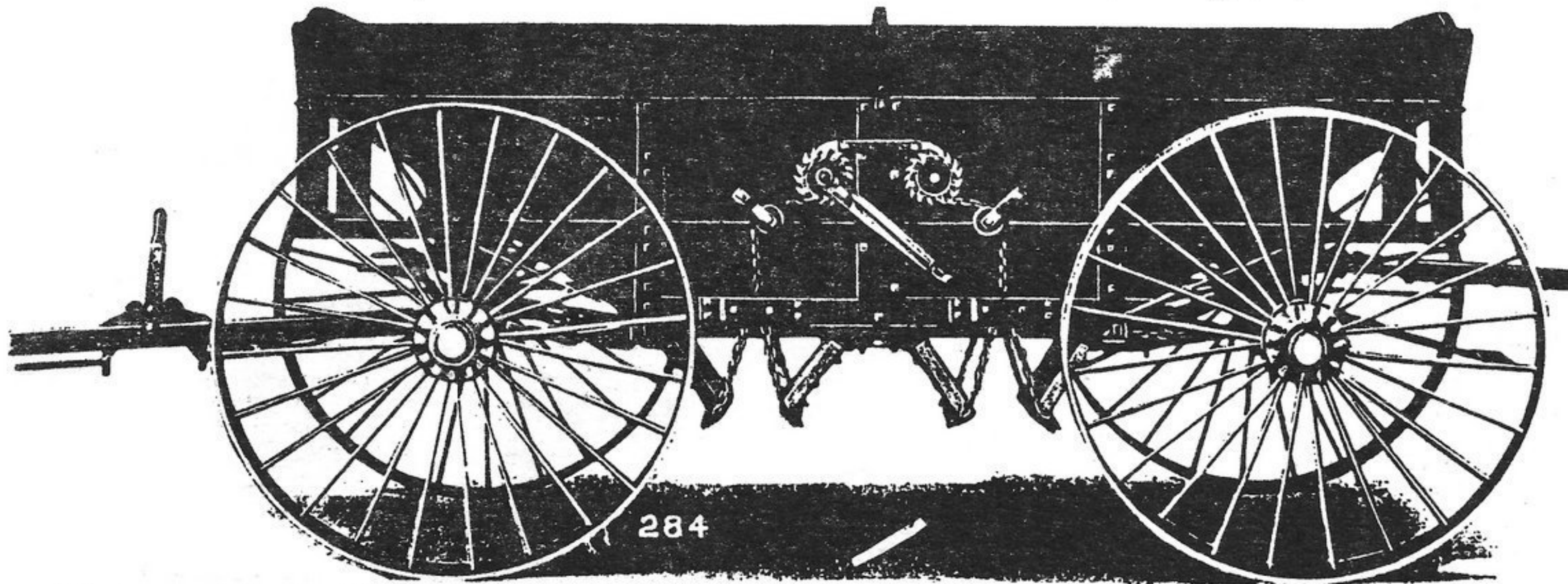
Brake Horsepower, 100 ; Rated Horsepower, 26. Two Road Speeds



undated

Illustration of our Double-Cylinder, Carbonized Steel Geared, Contractors' Special Engine, Locomotive Type, for road building, grading, reservoir, filtration and embankment work, and when used with our special reversible stone spreading cars and road freight cars for transporting heavy machinery, mining and contractors' supplies and in road building they have given universal satisfaction.

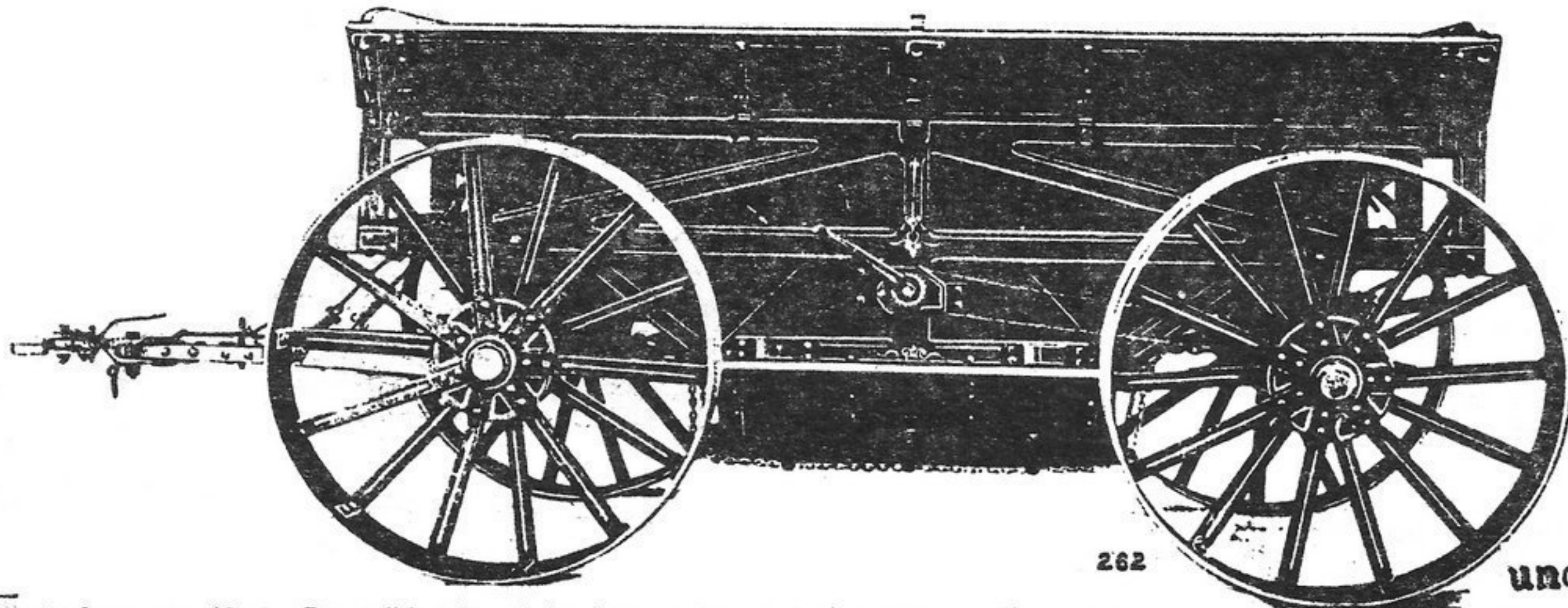
The 3½-Yard Buffalo Pitts Patent Reversible Stone Spreading Cars



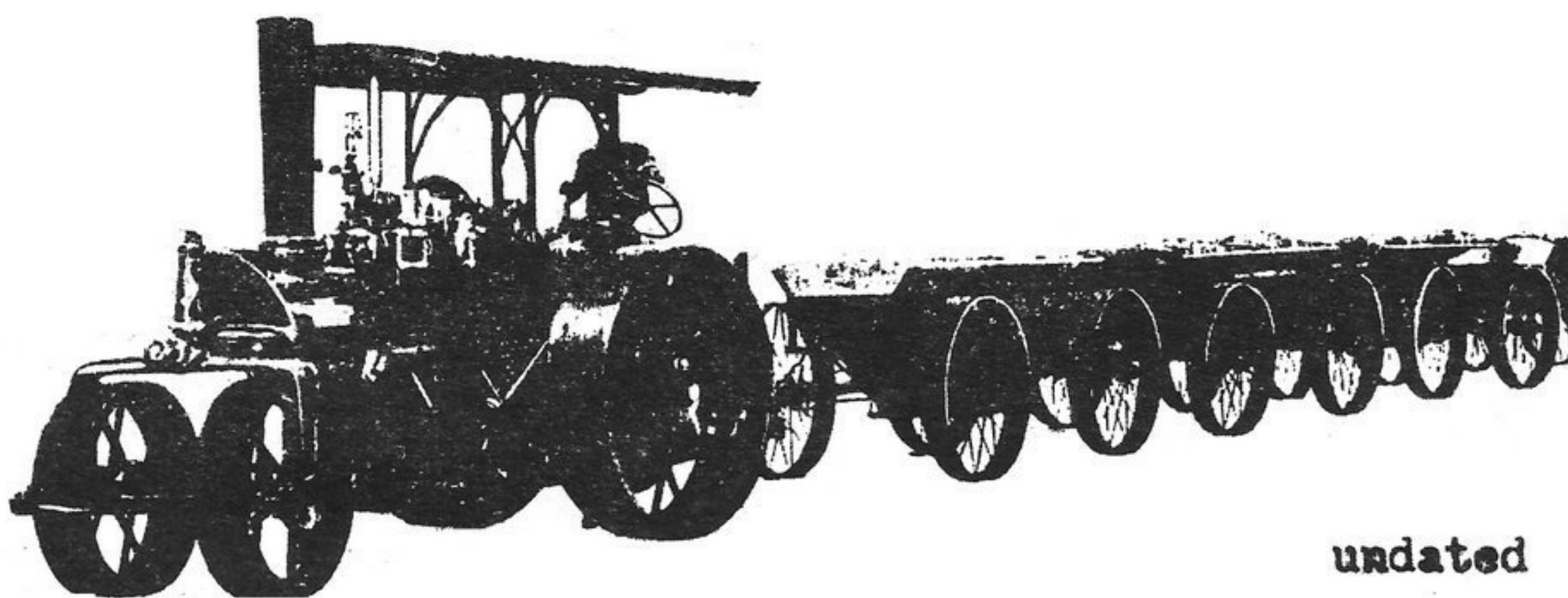
This car was designed and built by a man that has spent years studying the conditions under which these cars must work. This car is his Masterpiece, constructed as it is with a **Rigid Steel Frame, Steel Wheels and Axles**, well braced throughout in a very substantial manner, with strength sufficient for use with engines, and lightness together with light running qualities so it can be used with teams. Our new car has all the good features of our large cars, which have given such universal satisfaction. This car has several new patented features which place it in a class by itself. **This 5-ton car is also built with a Flat Body having Removable Sides, for hauling Brick, Cement, etc.**

The wheels are steel, 54 inches in diameter, with 8 inch tires and have phosphor bronze bushings in the hubs. Length of body 11 feet, wheel base 8 feet. Axles 2½ inches diameter. Five tons capacity. **undated**

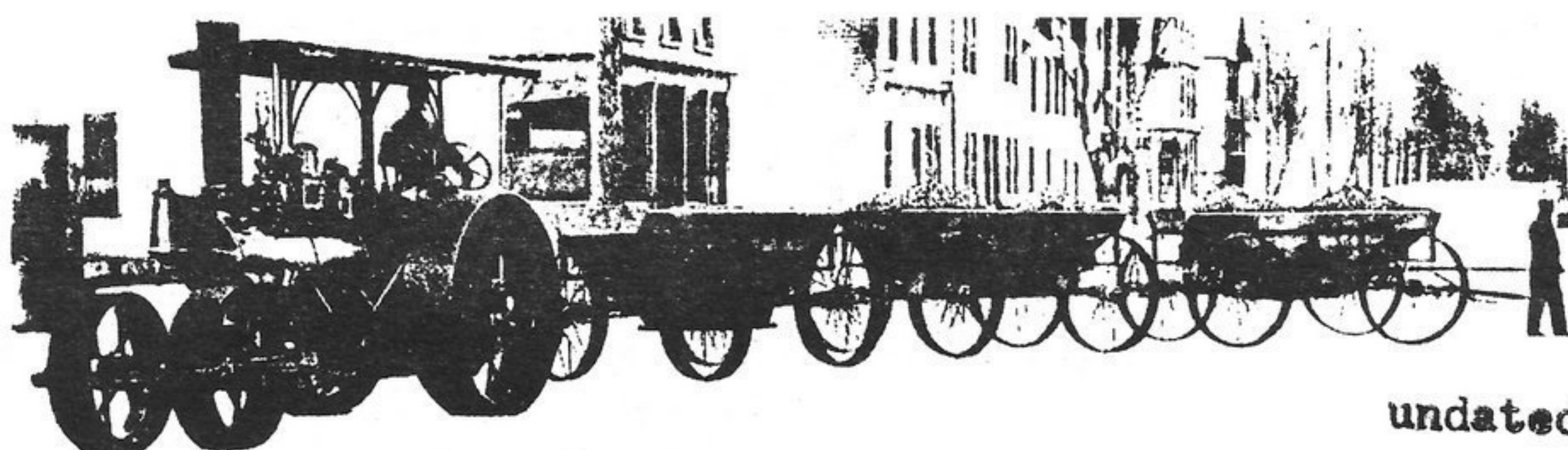
Buffalo Pitts Reversible Stone Car Bottom Dump Type 10-Ton Size



This cut shows our 10-ton Reversible Car of the Bottom Dump Type. This car is especially adapted for hauling dirt for fills, or hauling and spreading any other kind of material, such as gravel, crushed stone, ore, or anything that can be dumped into a pile. This is especially suited for any kind of embankment work. General specifications same as Stone Spreading Car **undated**

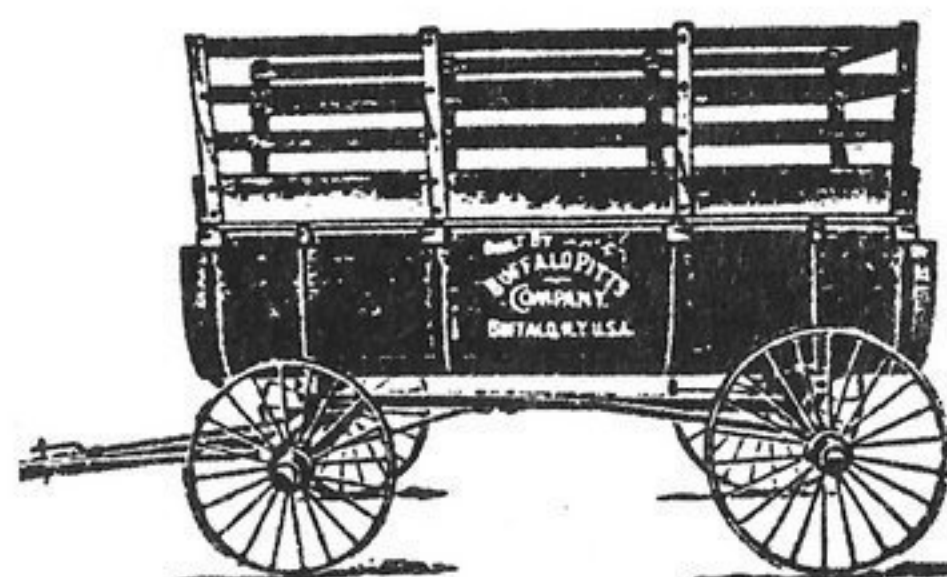


Buffalo Pitts Special Tractor Roller Hauling Train of Buffalo Pitts Reversible Cars.
The Tractor Wheels are Smooth to Avoid Injury to the Highway.



A Buffalo Pitts Special Tractor Roller backing a short train of Buffalo Pitts Stone Spreading Cars around a sharp curve, the end of the train being guided by one man, handling steering pole.

Buffalo Pitts Water Tank



We illustrate our wooden half-round tank, built with rack for carrying straw, or with box top for coal or wood.

THESE water tanks can be fitted with a sprinkling attachment for use in contract work and sprinkling roads and streets.

undated

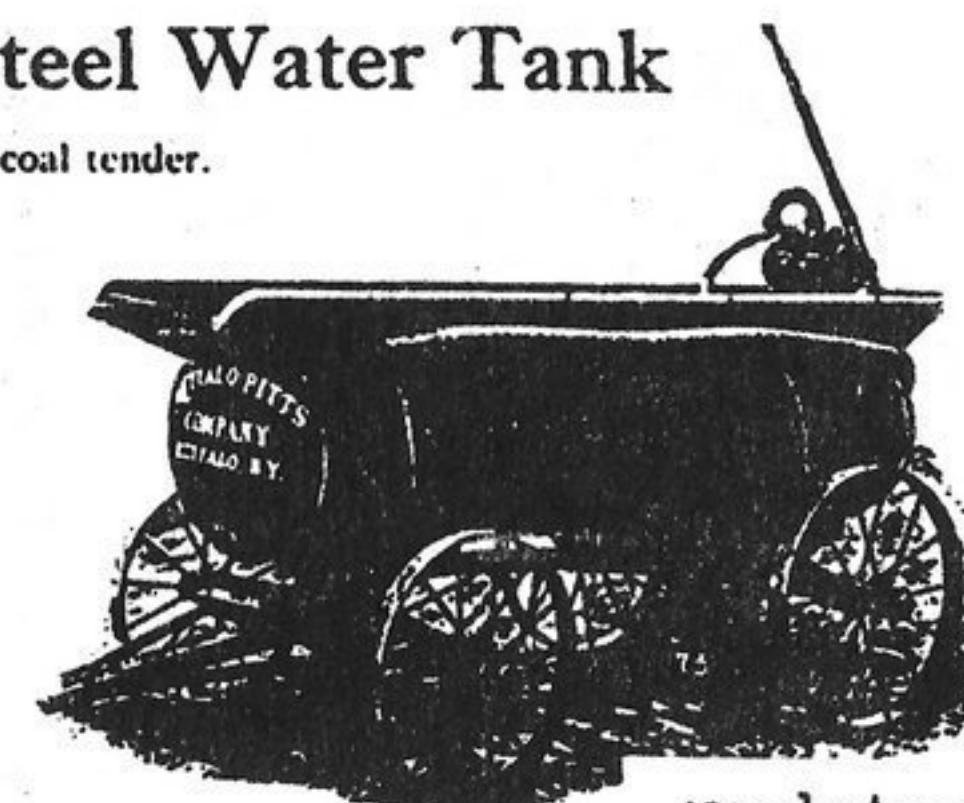
The Buffalo Pitts Steel Water Tank

This cut shows our new steel tank and coal tender.

The tank is made of heavy steel plates, closely riveted. To insure strength it is made oval, and the rivets will not shear off as in other makes. We use special iron heads fitted with valves for attaching hose and draining.

This is the strongest, yet lightest tank, for its capacity, manufactured.

The trucks are very strong and the wheels turn well under in close places.



undated

ROAD ROLLERS

Prior to 1889

There were no self-propelled road rollers manufactured in the U.S. The few in use were imported from England, and their use was limited to urban areas.

- 1889** The O. S. Kelly Company, Springfield, Ohio began experimenting with a steam-powered self-propelled road roller. It was a natural transition because O. S. Kelly had been manufacturing a steam-powered tractor engine for towing rollers.
- 1892** O. S. Kelly went into production on the first U. S. self-propelled steam-powered road roller.

- 1902** The company changed its name to the Kelly-Springfield Road Roller Company and the product became known as the Kelly-Springfield Roller. The same year a full line of tandem and three-wheel rollers was introduced by the company.

- 1908** Kelly-Springfield introduced the first gasoline-powered tandem roller. Although a significant breakthrough, it posed little threat to steam rollers for several years.

- 1910** With production at two rollers per day, Kelly-Springfield was the largest factory of its kind in the world - and had a reputation for manufacturing a superb product. But it had a viable competitor in a company in Buffalo, New York. The Buffalo Steam Roller Company's history closely paralleled Kelly-Springfield's. It manufactured a hauling unit known as the Buffalo-Pitts Steam Wagon. In 1901 it introduced the Buffalo-Pitts Road Roller.

- 1913** Both companies forged ahead on separate yet parallel ways - then the federal government proposed building 50,000 miles of national highways. The project proved a boon to both manufacturers and brought them into contact.

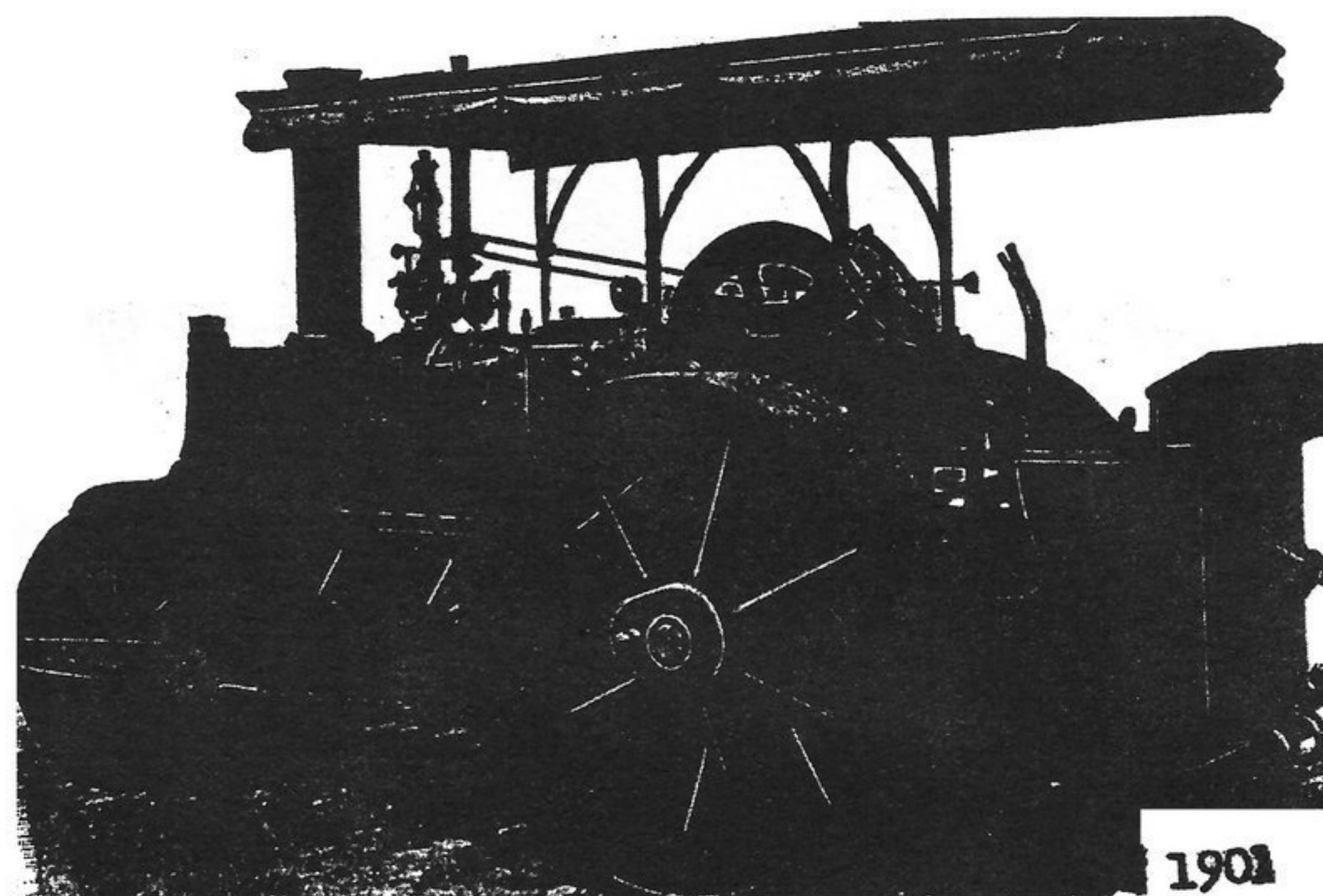
- 1916** The Buffalo Steam Roller Company and the Kelly-Springfield Road Roller Company merged to form the Buffalo-Springfield Road Roller Company. The Buffalo operation was moved to Springfield. 1916 also saw the introduction of a two-cylinder opposed gasoline-powered tandem roller with power steering.

1957 Koehring,

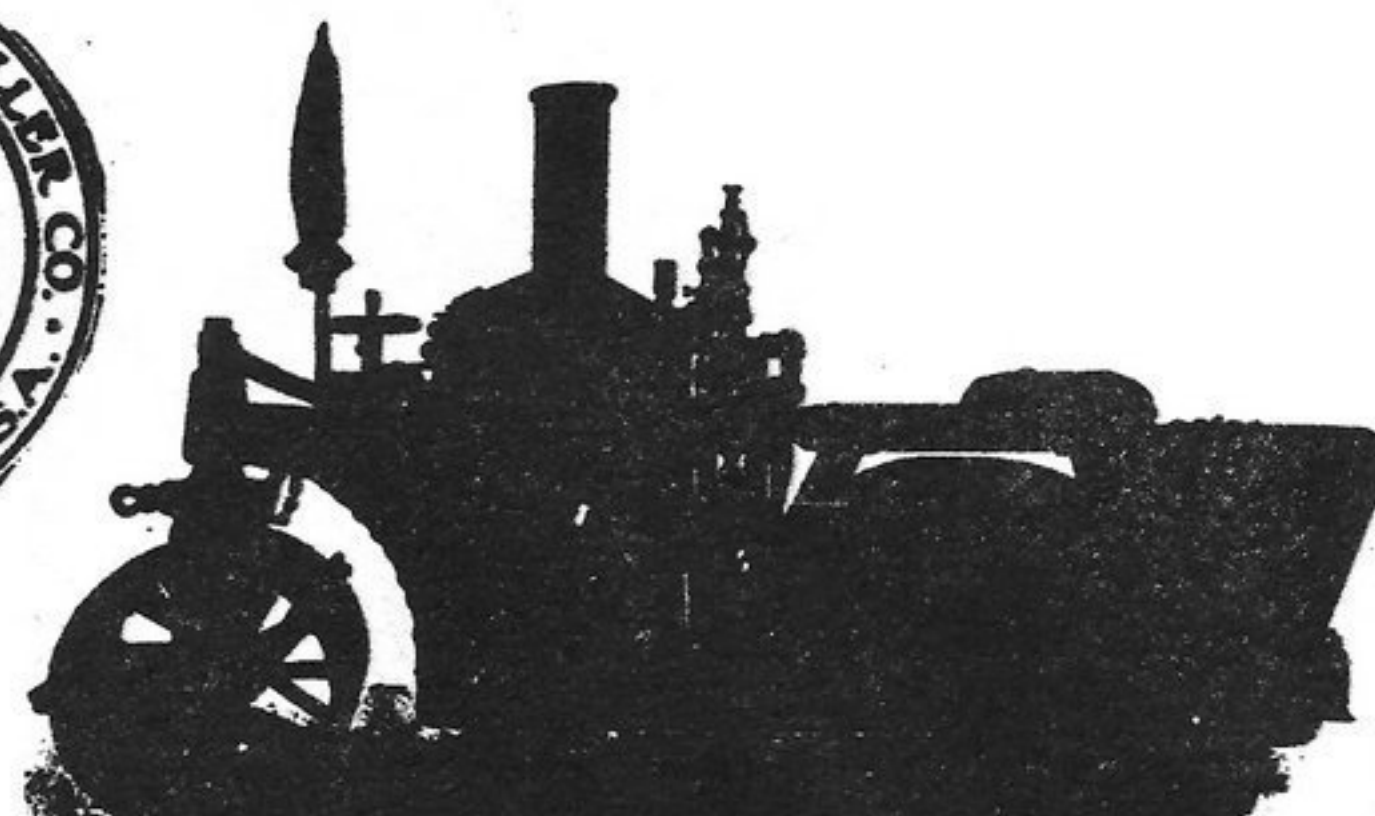
In 1957, Buffalo-Springfield Roller Co., of Springfield, Ohio, was purchased by Koehring Co., of Milwaukee, Wisc., and now operates as a division of that company.

15 Ton Buffalo Springfield Roller, 2 cylinder opposed gas engine, water-cooled with cone hopper. The exhaust creates the air movement which cools the water. It is very easy to start and sounds like a steam engine.

Gas Eng. Mag.
M-J 1967



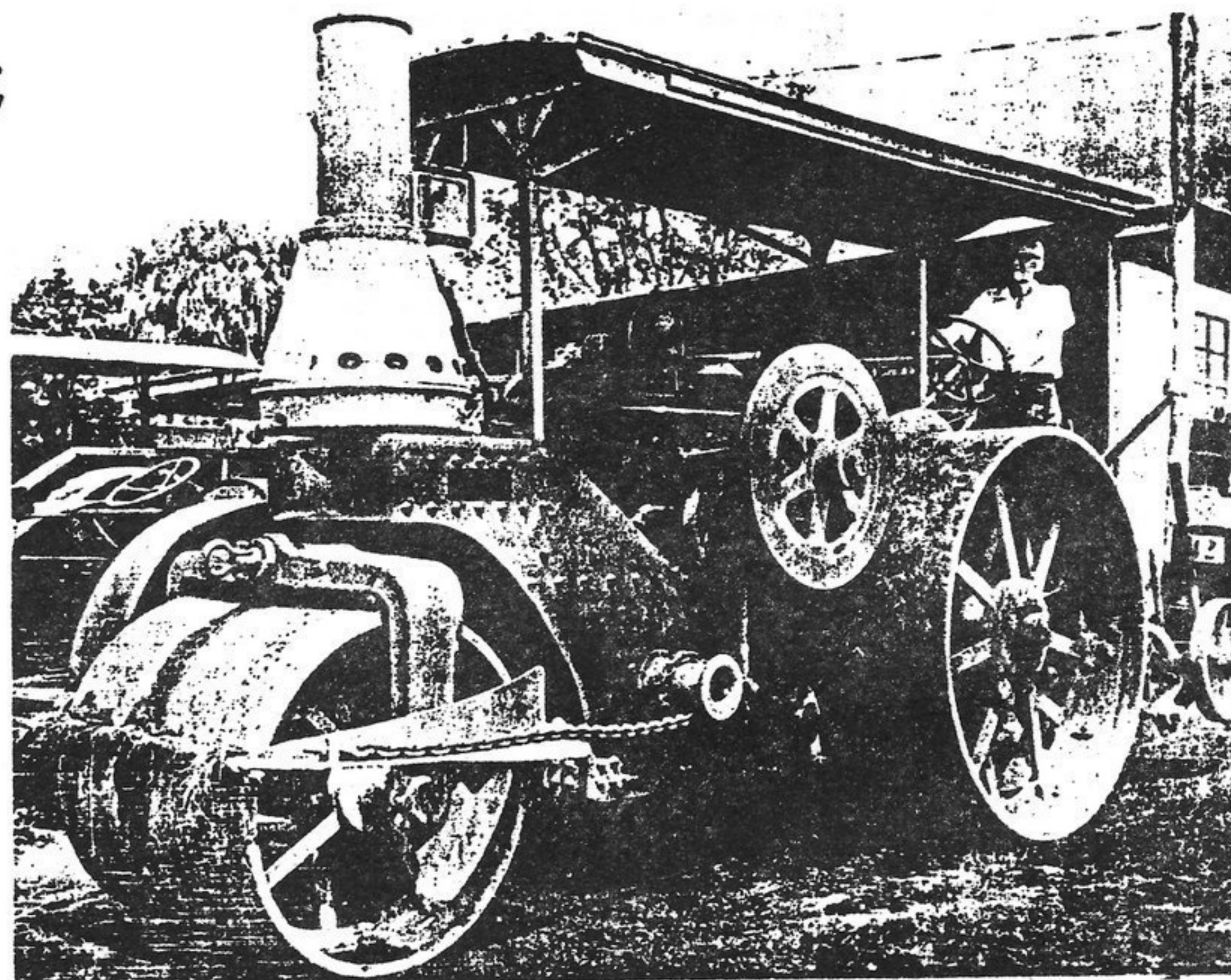
DOUBLE CYLINDER ROAD ROLLER



For Country Estates and Country Clubs

A roller is absolutely essential to the proper upkeep of driveways, paths, lawns, polo grounds, tennis courts, golf courses and athletic fields. It is perfectly evident that highest efficiency may be obtained from a tandem roller designed and constructed especially for this work. Owing to its special design, The Buffalo Pitts Double Direct Drive Tandem Roller qualifies for the above uses as no other roller does. Accordingly we would be glad to have requests for detailed information. Catalogues will be mailed to anyone interested.

BUFFALO STEAM ROLLER CO. { 18 Court Square, Buffalo, N.Y.
150 Nassau St., New York



DESCRIPTION OF THE

Buffalo Pitts Double Engine Steam Road Roller.

TWO CYLINDERS with no dead centers, no pulling on the fly wheel, and consequently no shocks to shafting or gearing in starting. LOCOMOTIVE LINK MOTION with no side strains. Case-hardened links, die blocks and pins. BOILER WITH GREAT EFFECTIVE HEATING SURFACE, insuring abundance of steam and economical consumption of fuel. CYLINDER, as it were, inside the boiler, reducing condensation to a minimum and insuring dry steam. GOVERNOR to regulate the speed of the engine to the requirements of the work, without the close attention of the operator. ROCKING GRATES AND DUMPING ASH-PAN, enabling the engineer to keep the grates free from clinkers and the ash-pan free from ashes without the use of poker or hoe. WATER AND FUEL CAPACITY for long and continuous work. EVERYTHING ARRANGED to be operated from the platform. FITTINGS AND FIXTURES of standard American manufacture, thus easily replaced when worn or damaged. TWO SPEEDS, greatly increasing the power. STEEL YOKE, STEEL BOILER AND STEEL SHAFTING, making it practically a STEEL ROLLER. THE CONVENIENCE for oiling and the ACCESSIBILITY of all its parts, recommending it to the mechanical engineer, and insuring its long life to the purchaser.

The Pitts Agricultural Works, Buffalo, N. Y., U. S. A.

NOTES

Company records were said to be destroyed. The following were obtained by correspondence and discussion with various individuals and have not been verified:

"International Harvester's proposal of a merger was declined early in the 1900s. This in spite of the fact that the financial panic of 1907 left the company liquidity inadequate to cope with the credit crunch".

"The later years they were in business they built machines that were sold by International Harvester Company".

35-70 TRIPLEX

"The 35-70 Triplex was advertised briefly in the early teens.

Not many were sold. (1910-1914?)

It was very big and awkward--more so than most of its competitors.

Problems with the 3 cylinder engines killed off the design.

Only a few were said to be built".

A Buffalo Pitts catalog from Australia shows International Harvester as agent in the early 1900s.

40-70 TRACTOR

"The 40-70, 4 cylinder, Kerosene Gas Tractor 1914-? (Gray shows 1914 as first date) Listed in 1919 and 1920 Tractor Field Book--not in later years.

Tractors said to be built by Twin City--Twin City had a similar design.

Gray says 'Buffalo Pitts produced their 40-70 using a Twin City engine'.

Buffalo Pitts may have again tried to enter the tractor market in 1920 by using these methods.

The company was said to be in receivership in 1914 (some sources show up to 1917) and then apparently reorganized. It is doubtful if any tractors were built in the late teens or 1920. Possibly a few prototypes may have been built (see Twin City above). The evidence is dubious and contradictory".

"You can't get away from it"--

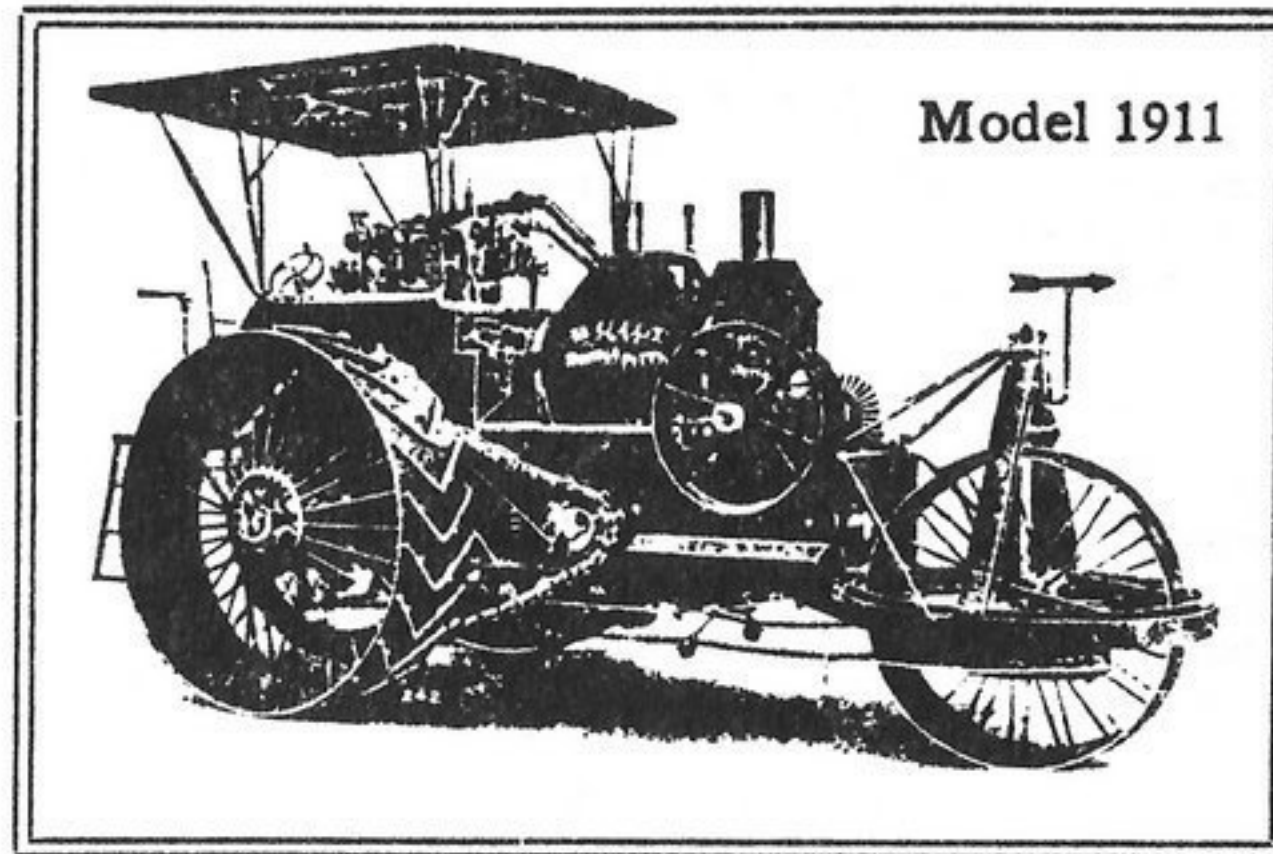
There's Money in the "BUFFALO"

INTERNATIONAL HARVESTER COMPANY OF AMERICA
(Incorporated)
Roma Street, Brisbane. 37 Broadway, Sydney. 545 Bourke Street, Melbourne.
Bank Street, Adelaide. 75 York Street, Launceston.
GEO. WILLS & CO., Perth, General Agents for Western Australia.

GASOLINE TRACTORS

The Buffalo Pitts

Triplex Gas Tractor



Model 1911

Designed and built especially for traction purposes, plowing, hauling and road work. Is equipped with pulley for driving threshing or other machinery.

In this engine's being made purposely for traction work lies the secret of its success for such work. The motor is three cylinder, short stroke and high-speed type, the impulses coming closely together, enabling it to recover its normal speed quickly, when lowered by reason of excessive pull or manipulation of the operator. This does away with the necessity for large, heavy balance wheels to maintain the speed. You have at your command in this engine an equivalent of a 20 to 25-H. P. steam engine, more easily operated and tended and at a much less expense for fuel. These engines are at work in different parts of the country successfully plowing under any and all conditions. A letter from a user is given herewith:

Buffalo Pitts Co., Buffalo, N. Y.

Mayville, No. Dak.

Gentlemen: Wish to inform you that the Triplex Gas Engine purchased of you this fall has given us entire satisfaction. We started with eight bottoms but changed to ten, plowing seven and eight inches deep in hard soil and the engine handled the ten nicely. The engine has surplus power to pull ten 14-inch bottoms, plowing as deep as any man may wish.

[Signed] C. A. ULLAND

BUFFALO PITTS CO.

BUFFALO, NEW YORK

FARGO, N. D. MINNEAPOLIS, MINNESOTA BILLINGS, MONTANA
WICHITA, KANSAS HOUSTON, TEXAS LINCOLN, NEBRASKA LOS ANGELES, CALIFORNIA

Our Gasoline Engine

IN presenting our gasoline tractor to the public, we wish to call attention to a few points of superiority over the general construction of farm gas engines.

The engine has been designed primarily as a tractor to be used for hauling and plowing, but is also equipped with a pulley for driving threshers, corn shredders, and such other machinery as may be desired.

In designing the motor for this class of work which differs entirely from stationary work, it was necessary to have an engine that would recover its speed quickly in case of the speed being lowered, either through the influence of the load, or through the necessary manipulation by the operator. In order to accomplish this on a gas engine tractor, it is necessary that the impulses must come as close together as possible. In order to do this, we use a short stroke motor at comparatively high speed, and a multiplicity of cylinders, giving us at normal speed, 720 impulses per minute, and the turning effect of a single cylinder steam engine running at a speed of 360 revolutions per minute, or a double cylinder engine running at 180 revolutions per minute. These results cannot be obtained by a single or double cylinder gasoline engine of the long stroke type requiring the momentum of enormous balance wheels to carry the load at the long interval between each impulse.

TRIPLEX

The Buffalo Pitts Company, a veteran builder of steam engines, entered the market with a gasoline tractor about the same time as several other companies, but its unsuccessful efforts were short lived. The bust of the big tractor boom may have been responsible, but more likely the 35-70's design was just too unconventional for those early days.

The 35-70 was powered by a three cylinder

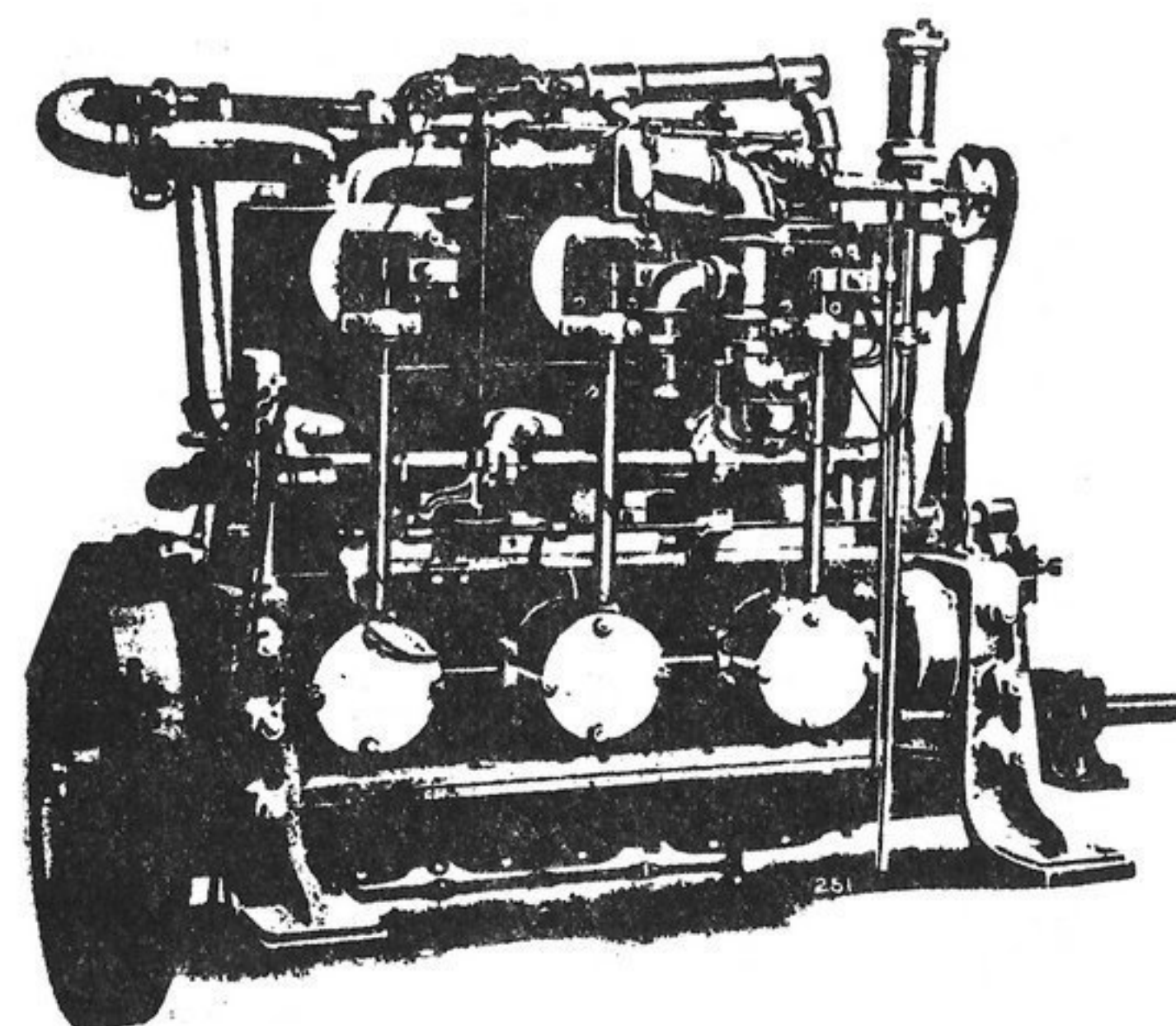
vertical, cross-mounted engine with the crank throws 120 degrees apart. It operated at 650 rpm. Ignition was by a high tension magneto. Coolant was circulated by a pump through cooling towers where it was cooled by a forced draft induced by the exhaust. Lubrication was by a combination force feed and splash system.

A tricycle wheel arrangement was used with the front steering wheel unit being turned by a

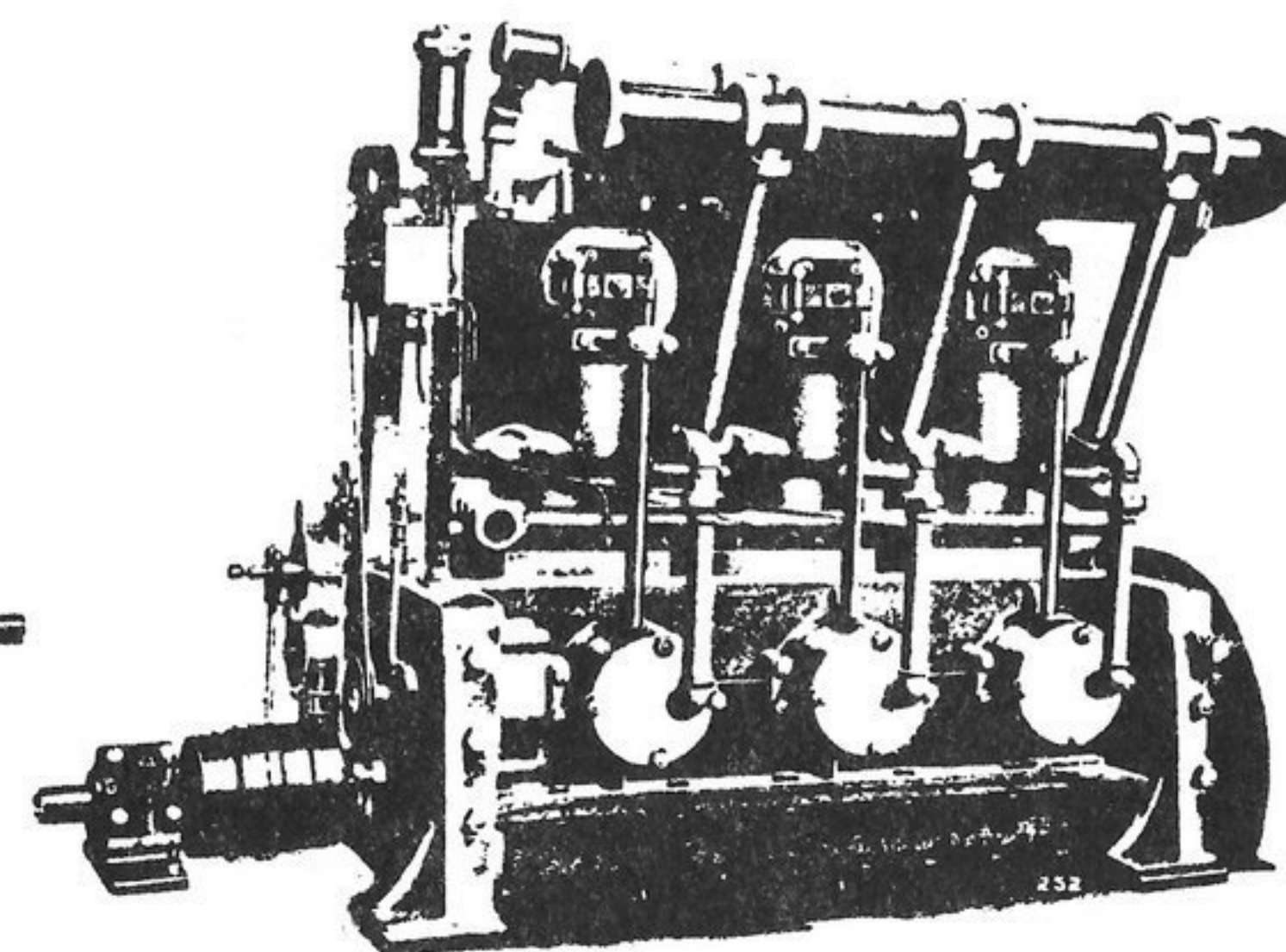
barrel and chain steering linkage. Power was transferred through open spur gears with a chain final drive. A single speed forward of 2.3 mph and reverse were provided and the tractor was capable of pulling twelve 14" plows.

It appears that very few 35-70's were sold. The tricycle design never caught on, even in the smaller sizes of these early tractors. It must have been a serious handicap for such a large, heavy tractor. It was probably very unstable as Hart Parr eventually found out. Buffalo Pitts advertised that its three cylinder engine design

provided more even power and a quicker speed recovery than two or four cylinder engines, and did not require a large heavy flywheel to turn over center. In view of the difficulties of balancing adequately a large displacement, slow speed three cylinder engine, Buffalo Pitts probably couldn't solve all the problems its engineers encountered. Engine design was not far enough advanced. It would be many years before the three cylinder concept was successfully used in tractor engines. It is interesting to note that Buffalo Pitts used a four cylinder engine in its next model.



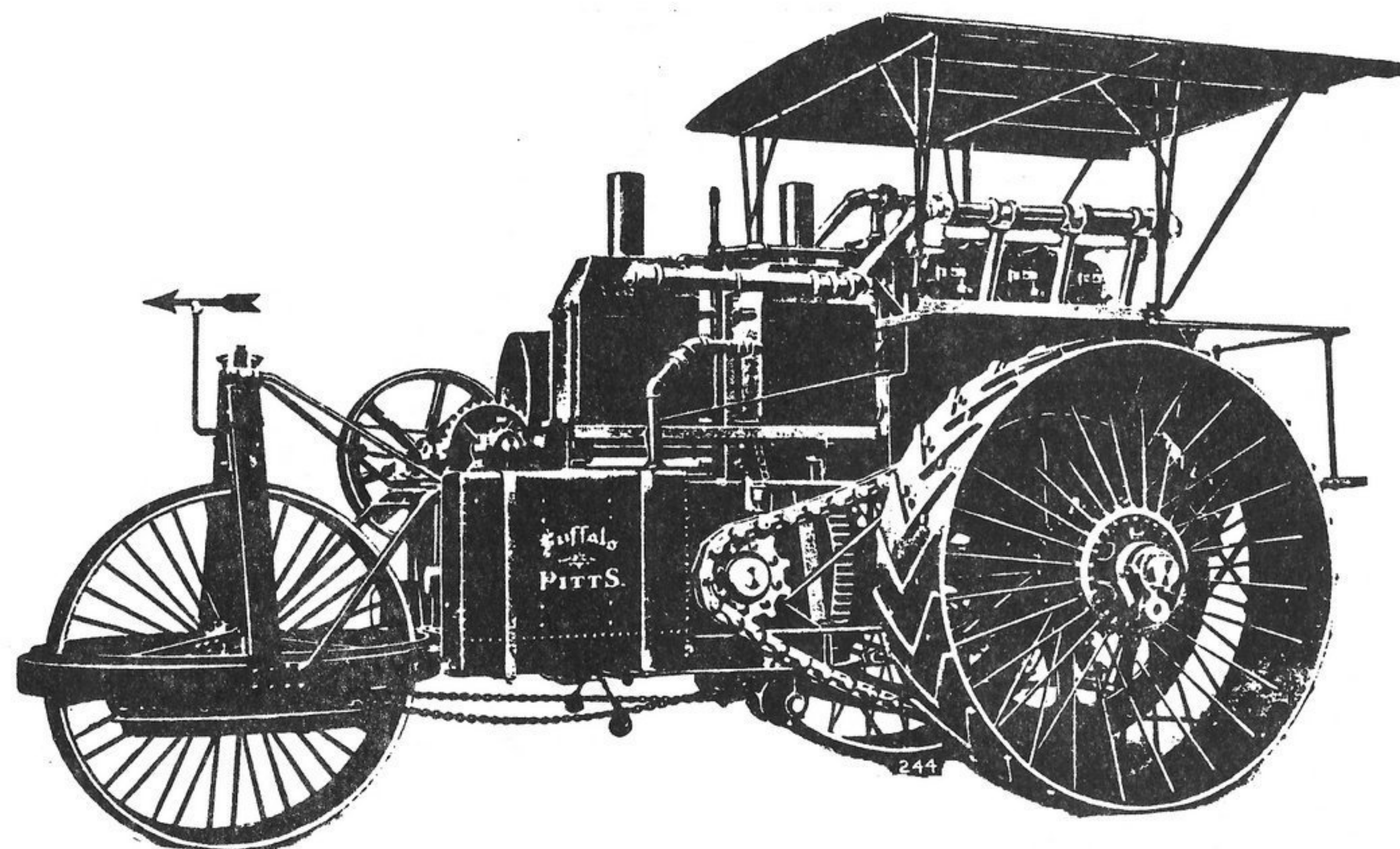
RIGHT HAND VIEW OF MOTOR



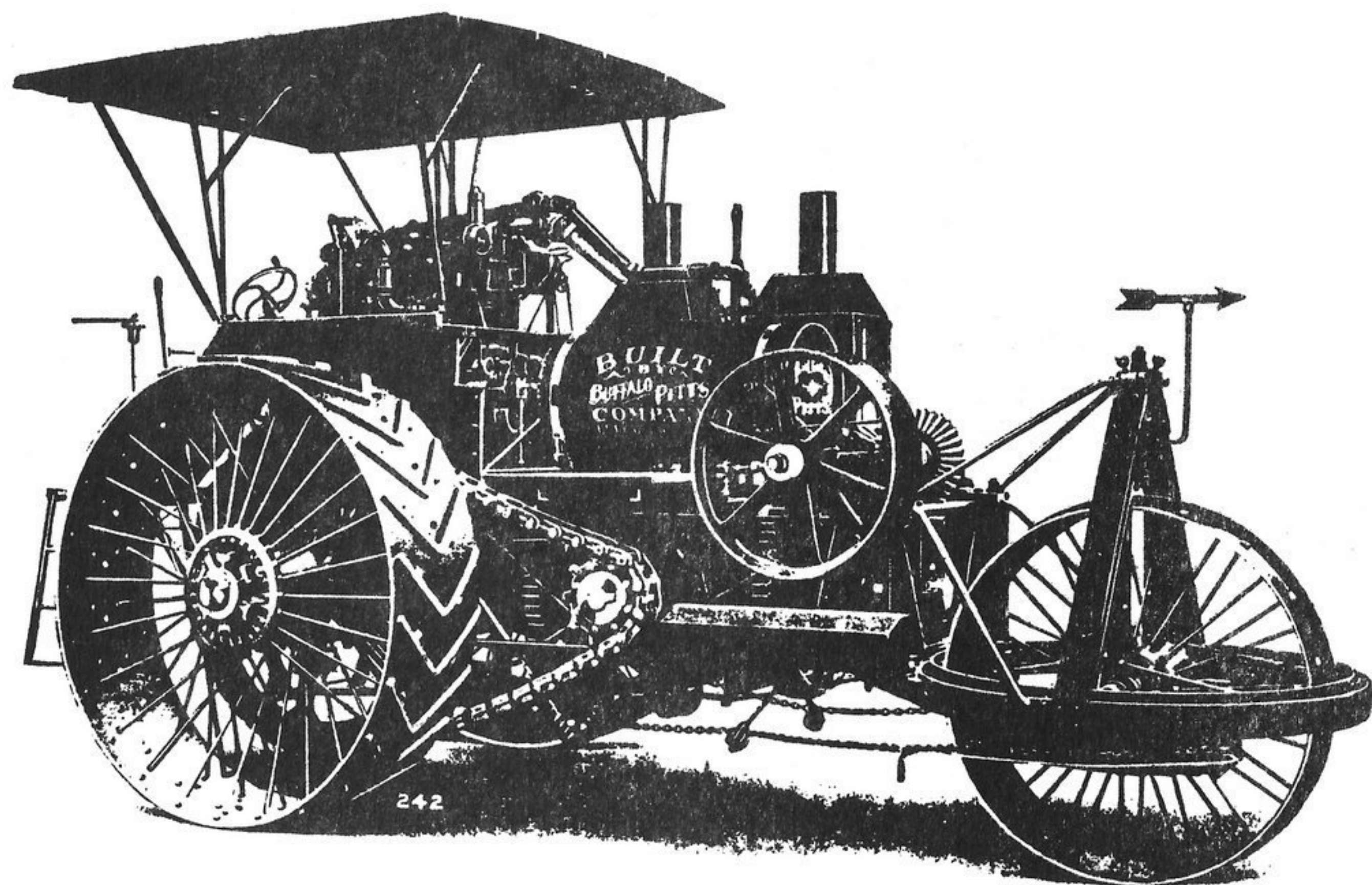
1911

LEFT HAND VIEW OF MOTOR

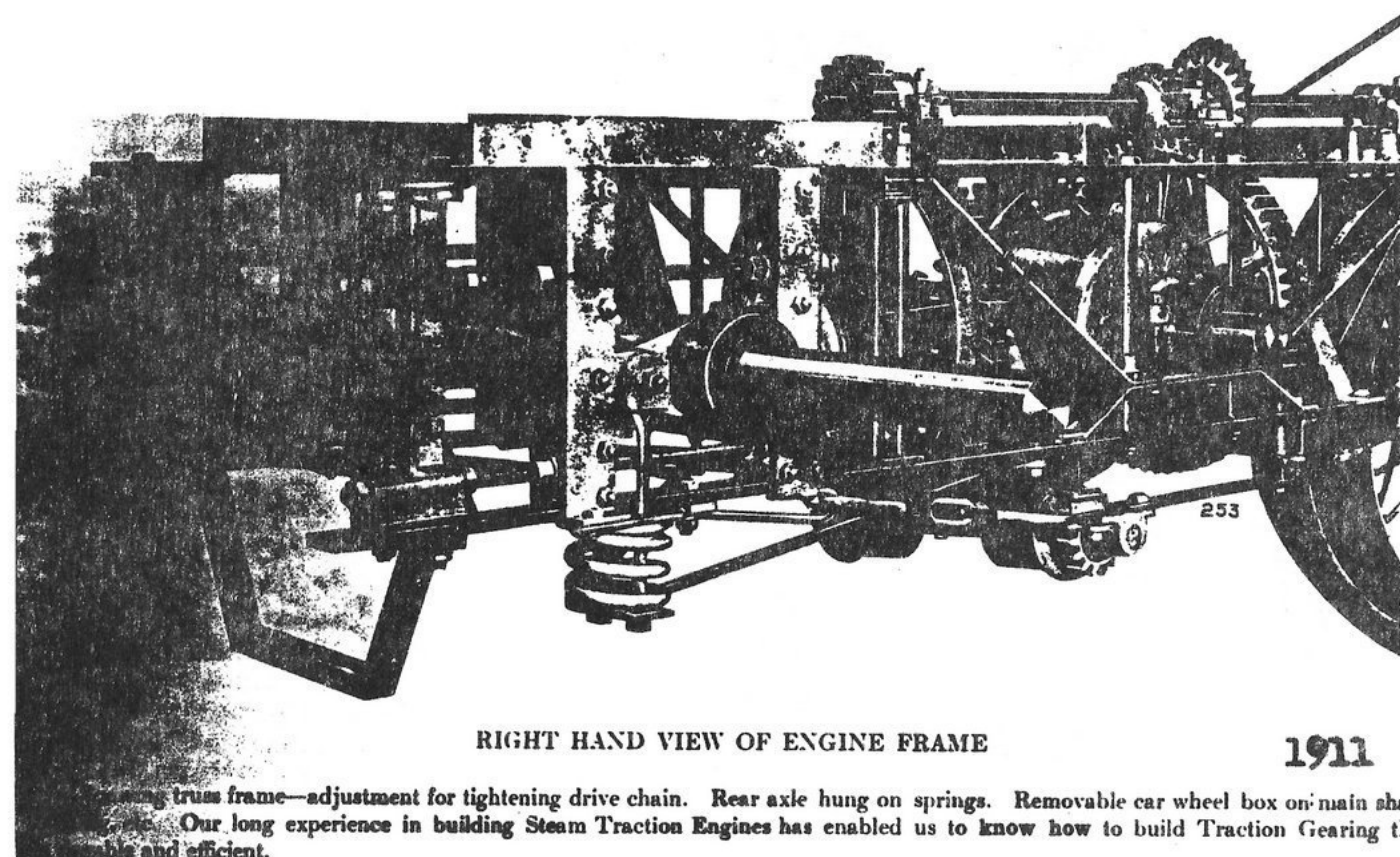
THE MOTOR.—Giving due consideration for simplicity of design, we have kept the number of cylinders as low as consistent with economy and efficiency, and for that reason we have used a three-cylinder motor of the four-cycle type possessing several new features which tend to durability, efficiency, and economy, also accessibility of parts.



THE BUFFALO PITTS TRIPLEX GAS TRACTOR—MODEL 1911—LEFT HAND VIEW



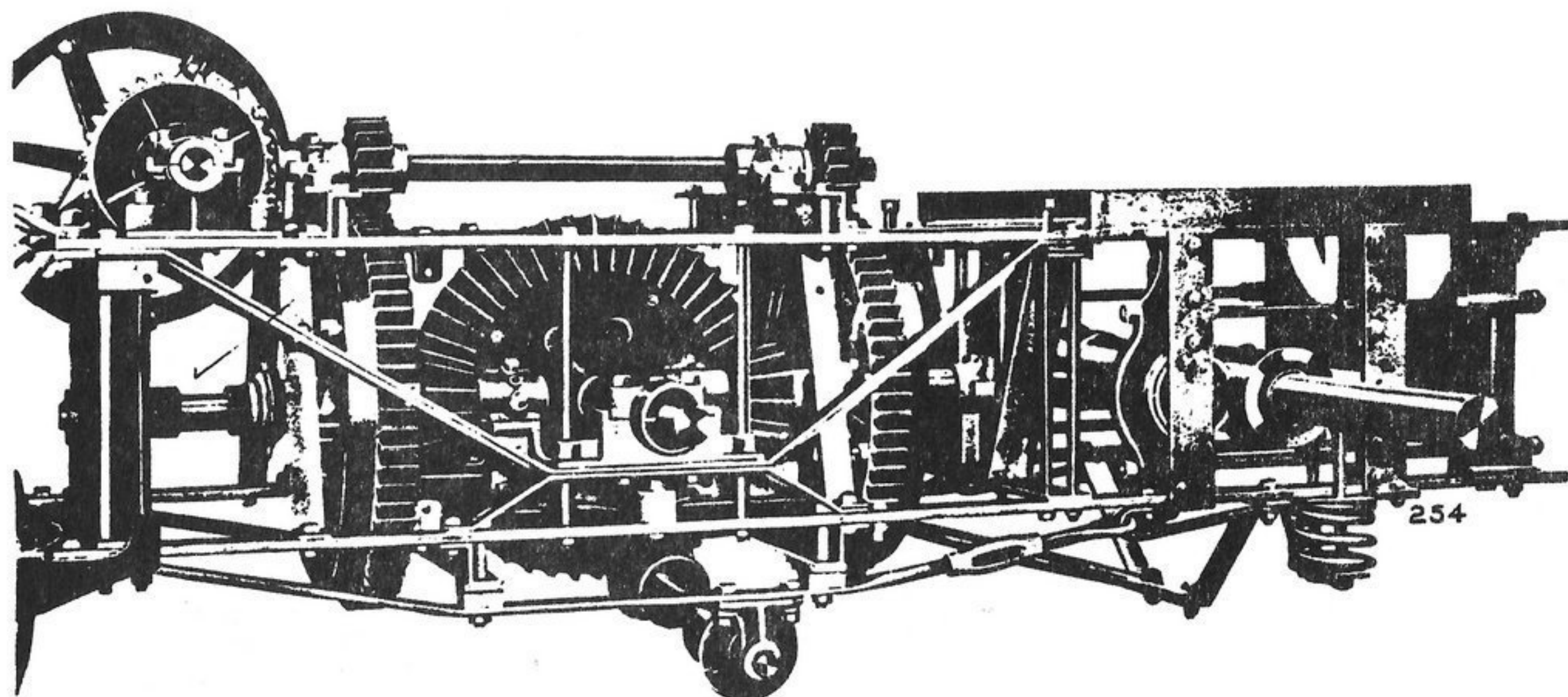
THE BUFFALO PITTS TRIPLEX GAS TRACTOR—MODEL 1911—RIGHT HAND VIEW



RIGHT HAND VIEW OF ENGINE FRAME

1911

Showing truss frame—adjustment for tightening drive chain. Rear axle hung on springs. Removable car wheel box on main shaft. Our long experience in building Steam Traction Engines has enabled us to know how to build Traction Gearing that is reliable and efficient.



LEFT HAND VIEW OF ENGINE FRAME

1911

Showing band wheel drive, which is operated only when the belt power is wanted. Also clutch arrangement and gearing. You will find the Buffalo Pitts Quality in every part of the construction.



THE BUFFALO PITTS TRIPLEX GAS TRACTOR

Pulling 8 to 14-inch bottoms—extremely hard ground.

1910 Buffalo-Pitts

35-70 H.P., 650 r.p.m., 3-cylinder vertical engine mounted crosswise, crank throws 120 degrees apart; cooling, through pump and large radiator with induced draft from exhaust; lubrication, combination force feed and splash; high-tension magneto ignition; clutch, friction band in fly-wheel; transmission, spur gear; final drive, chain and sprocket for each rear wheel; one forward speed, 2.3 m.p.h.

Gray

Buffalo Pitts came out with a unique tractor in 1910. Rated as a 40-70, it used a three-cylinder engine. The fuel tank and radiator were placed above the massive reduction gears and differential. A roller chain drive connected the rear wheels to the bull pinions. With all its weight, the single front wheel must have been almost impossible to handle.

Wendel

BUFFALO PITTS COMPANY

BUFFALO, N. Y., U. S. A.

ESTABLISHED 1897

SPECIFICATIONS OF THE

Buffalo Pitts 40-70 Kerosene Gas Tractor

Four Cylinder

Four Cycle

Cylinders, 7 1/4" bore x 9" stroke

Vertical

550 Revolutions per Minute

Jump Spark

Magneto

Volume Governor

Oiling system for motor multiple force feed pump

Belt pulley, 27 1/2" diameter. 400 Revolutions Per Minute.

Traction wheel, 7' high, 2' wide, spurs and cleats

Front wheels, 3' 6" high, 1' wide

Revolving rear axle

Force draft radiator

Kerosene tank, 70 gallons

Gas tank, 20 gallons

Draw head at front and rear

Special plow hitch underneath

Counter shaft and rear axle bearings are extremely large and are equipped with large grease cups

The gears are all extremely heavy, well housed from dirt and dust, with gravity oiling system

Cab, built of steel; a large platform for operator; all operating parts within reach of operator without leaving platform

70 rated Brake Horsepower

40 Traction Horsepower at draw bar

Weight, approximately, 22,000 pounds

FOUR-CYLINDER

JUMP SPARK

FOUR WHEELS

FOUR-CYCLE

VOLUME GOVERNOR

DOUBLE GEAR

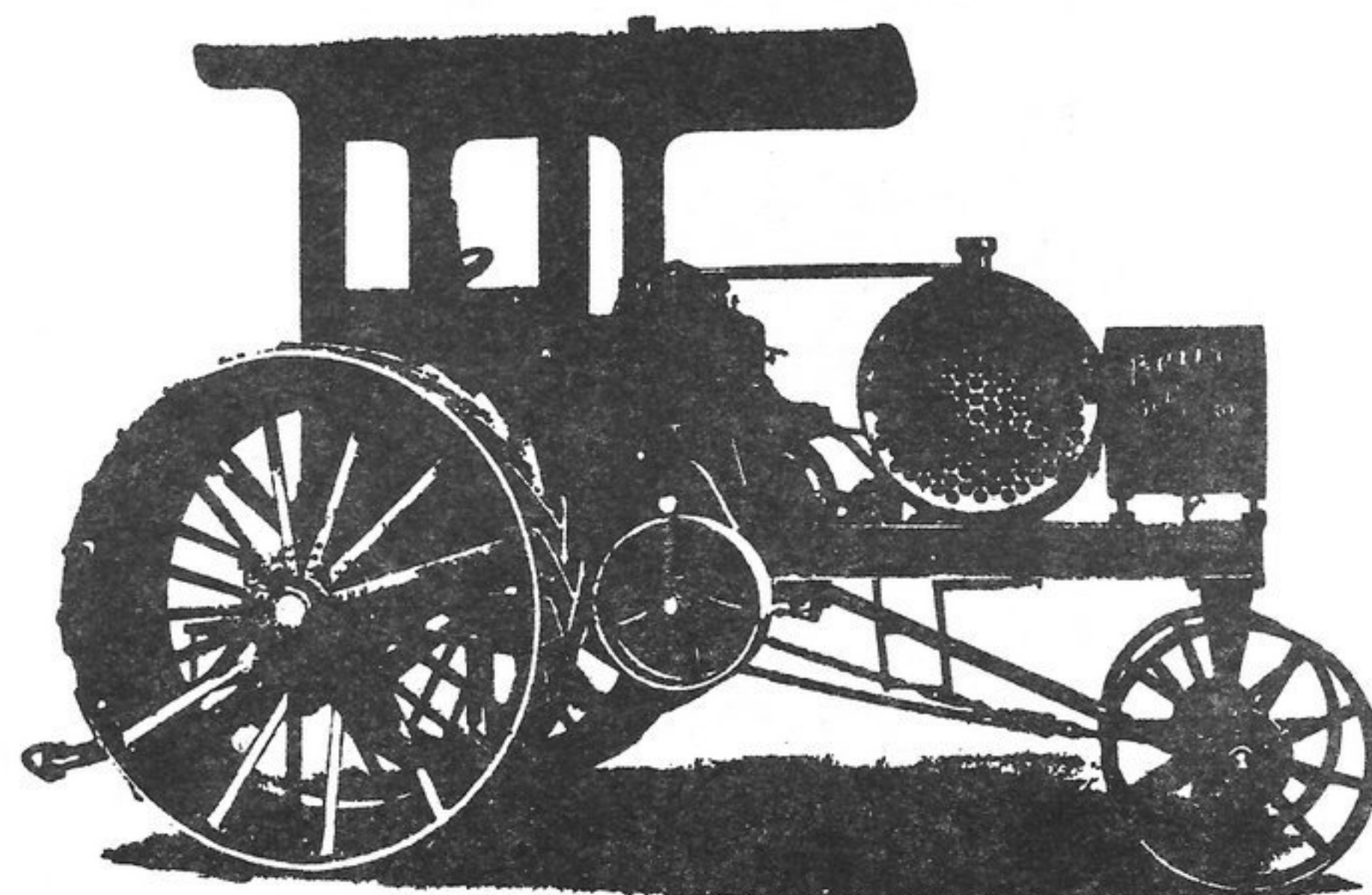
1914 Buffalo Pitts

40-65 H.P., 500 r.p.m., 4-cylinder engine, mounted cross-wise, cylinders cast separately. Cooling, fan, pumps, and tubular radiator; high-tension ignition; two 4-shoe-expanding clutches - one for forward and one for reverse; final drive, enclosed internal bull gears and pinions; two forward speeds, 1-1/4 and 2-1/2 m.p.h.

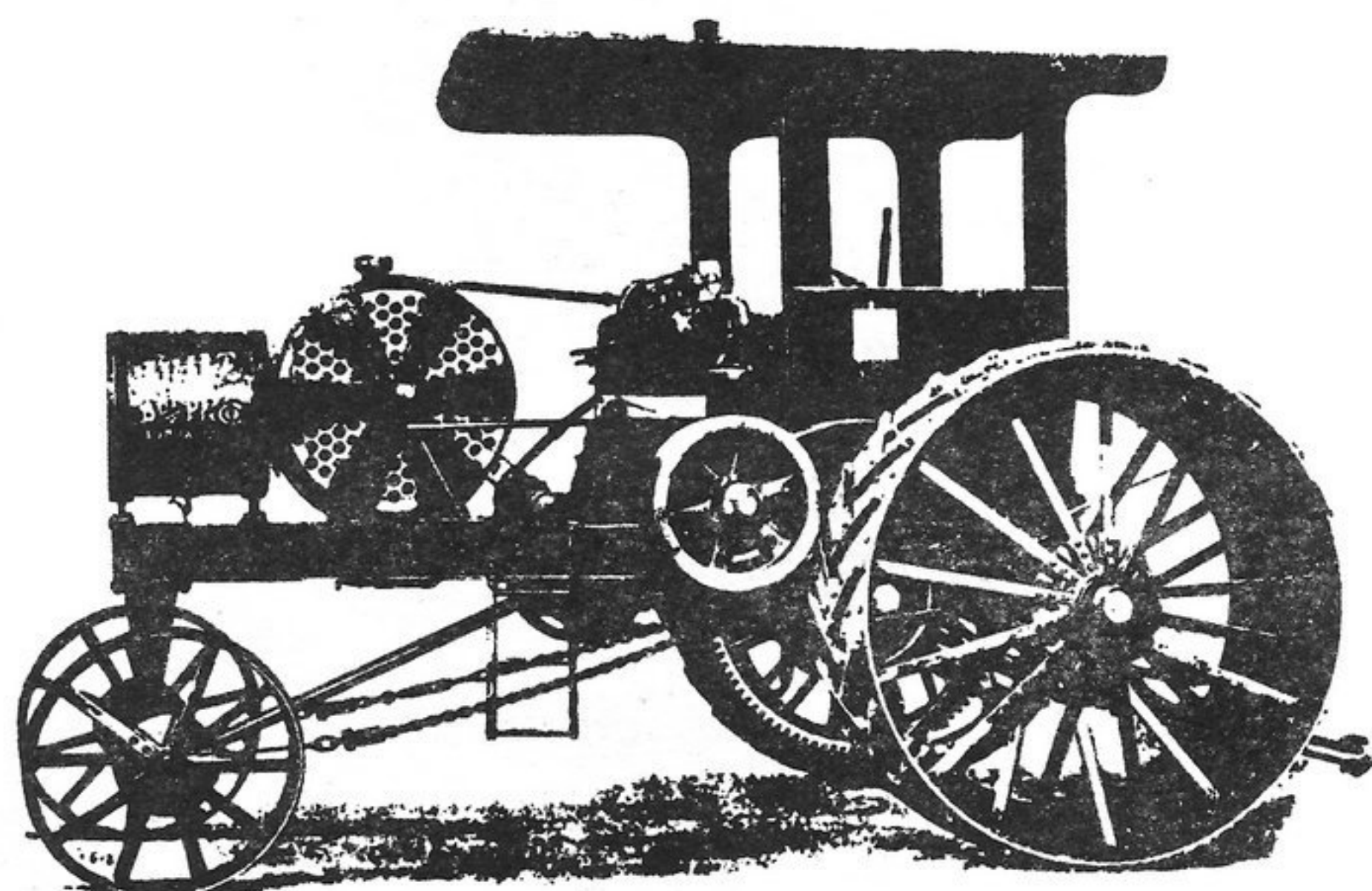
Gray

This Buffalo Pitts 40-70 model was listed in 1920. The tractor directories fail to show this model either in prior or later years, and the specifications are sketchy, although it used a four cylinder engine having a 7 1/2 x 9 inch bore and stroke. Further information regarding this tractor is presently unavailable.

Wendel



Four-Cylinder Kerosene Gas Tractor. Right Hand View



Four-Cylinder Kerosene Gas Tractor. Left Hand View
40 Draw Bar 70 Brake H. P.

E&E 1957

SPEED

2 1/2 Miles Per Hour, High Speed 1 1/4 Miles Per Hour, Low Speed
1 1/2 Miles Per Hour, Reverse Speed

E&E 1957

DO-IT-ALL TRACTOR

"The Do-It-All was designed by someone outside of Buffalo Pitts. They had done work for him, and as he couldn't pay his bills, the rights (patents) were taken over by Buffalo Pitts.

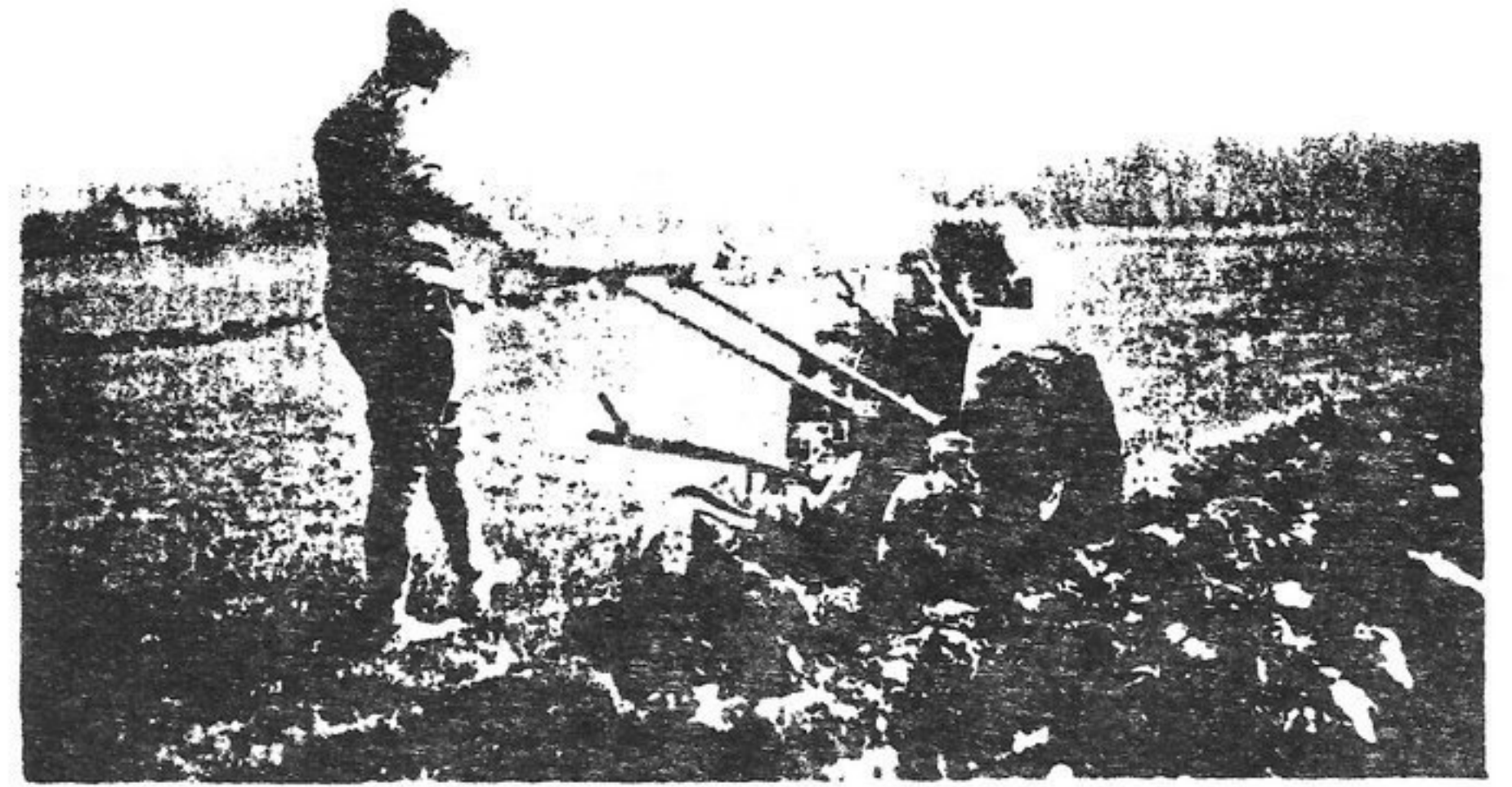
The Do-It-All had a one-cylinder gasoline engine, 2 wheels, and the operator walked behind. It was sold mostly in Erie County, and was built from 1917 to 1925.

Ford tractors finished the Do-It-All in the 1920s. They were priced lower for a full-sized four wheel tractor".

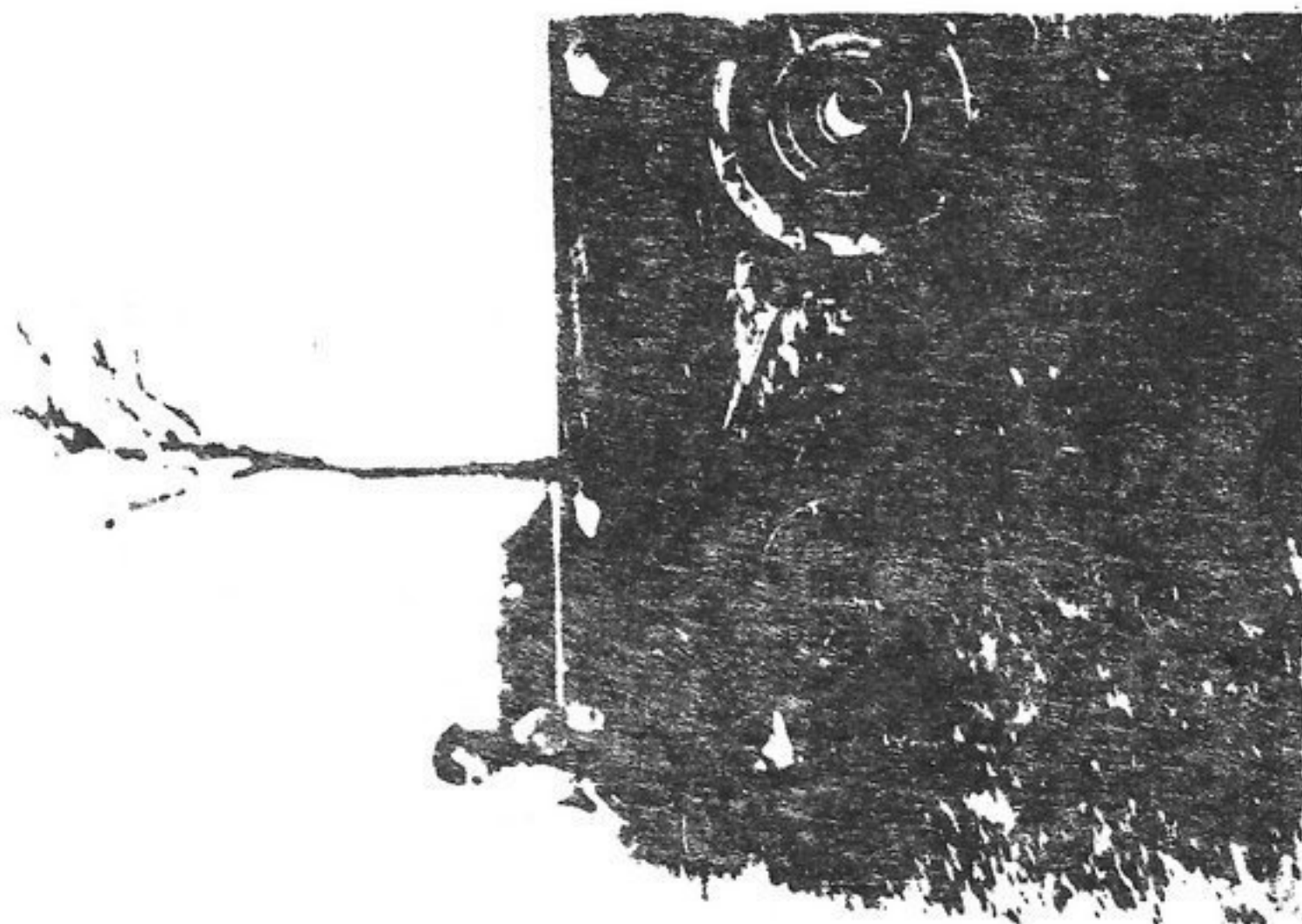
The relationship between the Buffalo Pitts Do-It-All and the Consolidated "Do It All" Tractor is not known. Buffalo Pitts may have sold the rights to Consolidated in the late 1920s. The Consolidated material is undated.



Buffalo Pitts Do-It-All



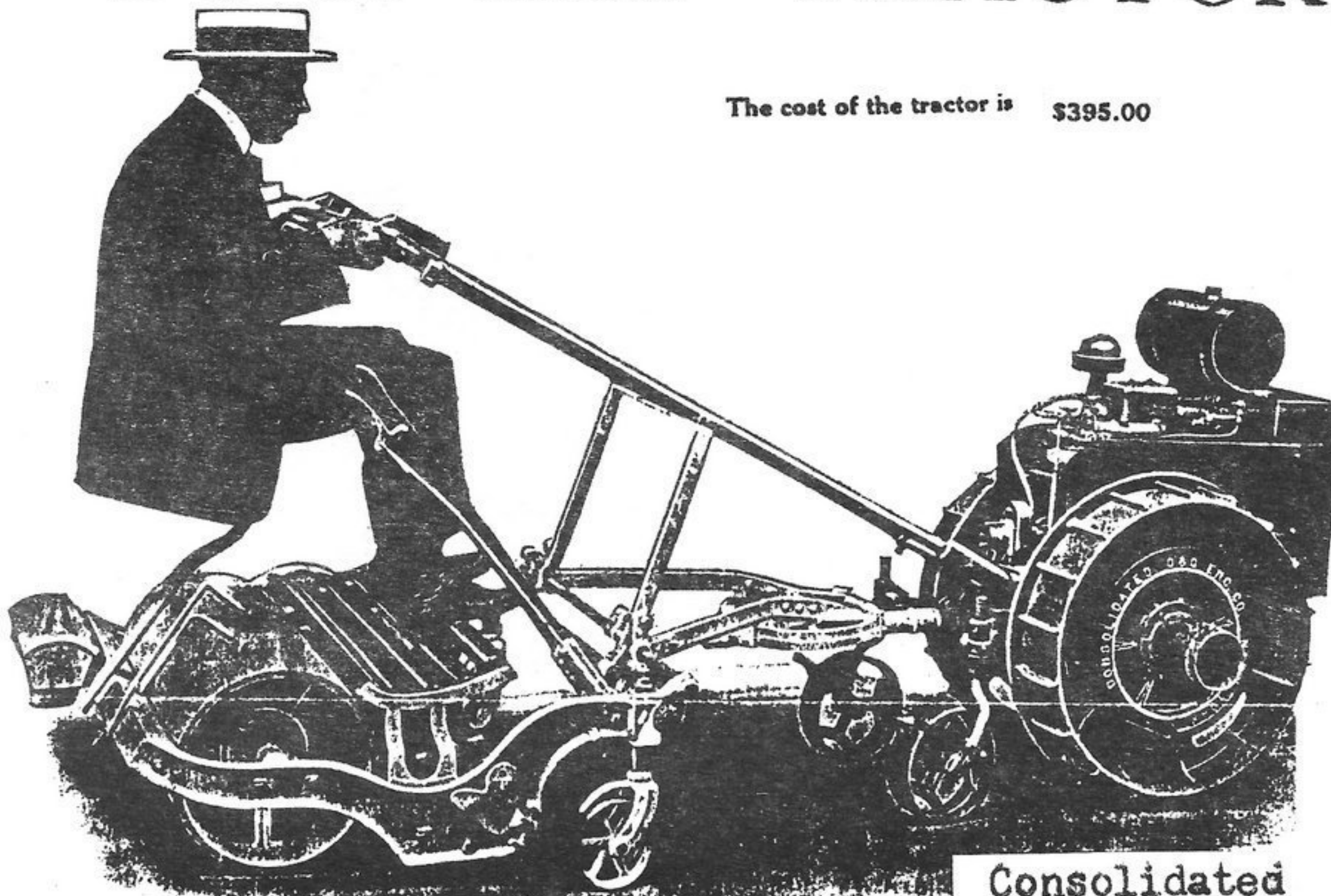
Buffalo Pitts Do-It-All



Buffalo Pitts Do-It-All

"DO IT ALL" TRACTOR

The cost of the tractor is \$395.00



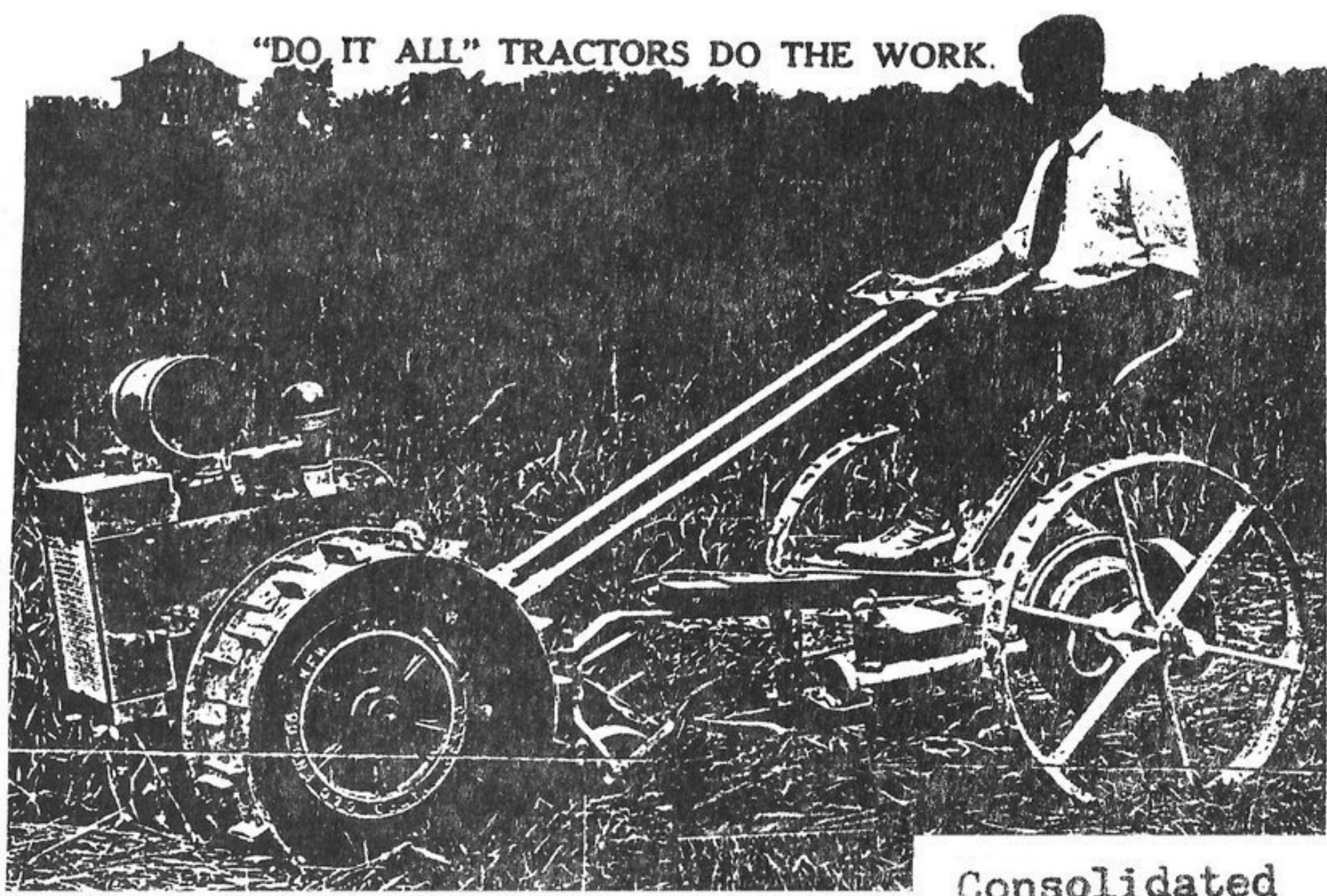
Consolidated

Consolidated Gas & Gasoline Engine Co.

202 FULTON STREET

35-P

35



TRUCK BODIES

"Buffalo Pitts was in the wood-working business in the 1920s, making truck bodies. Ford sold only truck chassis in the early 1920s. Buffalo Pitts made bodies for Ford, Stewart, etc. chassis.

Ford started building trucks with bodies in the late 1920s and finished the body business".

BUFFALO PITTS
COMMERCIAL BODIES

FOR

Ford, Chevrolet, Dodge, Star and

Overland Chassis

BUFFALO PITTS COMPANY
FOUNDED 1837
FACTORY AND GENERAL OFFICE:
BUFFALO, N. Y.

BETTER BUILT BODIES

BUFFALO PITTS cabs and windshields are built for model "T" and Ford one-ton chassis, Chevrolet, Overland and Star chassis.

Buffalo Pitts bodies are made from thoroughly seasoned white ash, oak, hard maple lumber.

Buffalo Pitts bodies have Vehisote panels.

Buffalo Pitts bodies are trimmed with genuine Zapon leather cloth (imitation leather) of good quality.

Buffalo Pitts bodies and cabs have spring cushions, all springs made from Premier spring steel wire.

Buffalo Pitts bodies and cabs are ironed with drop forgings, wrought iron and malleables.

Buffalo Pitts products are painted by hand and nothing but the best quality paints, oils and varnishes are used.

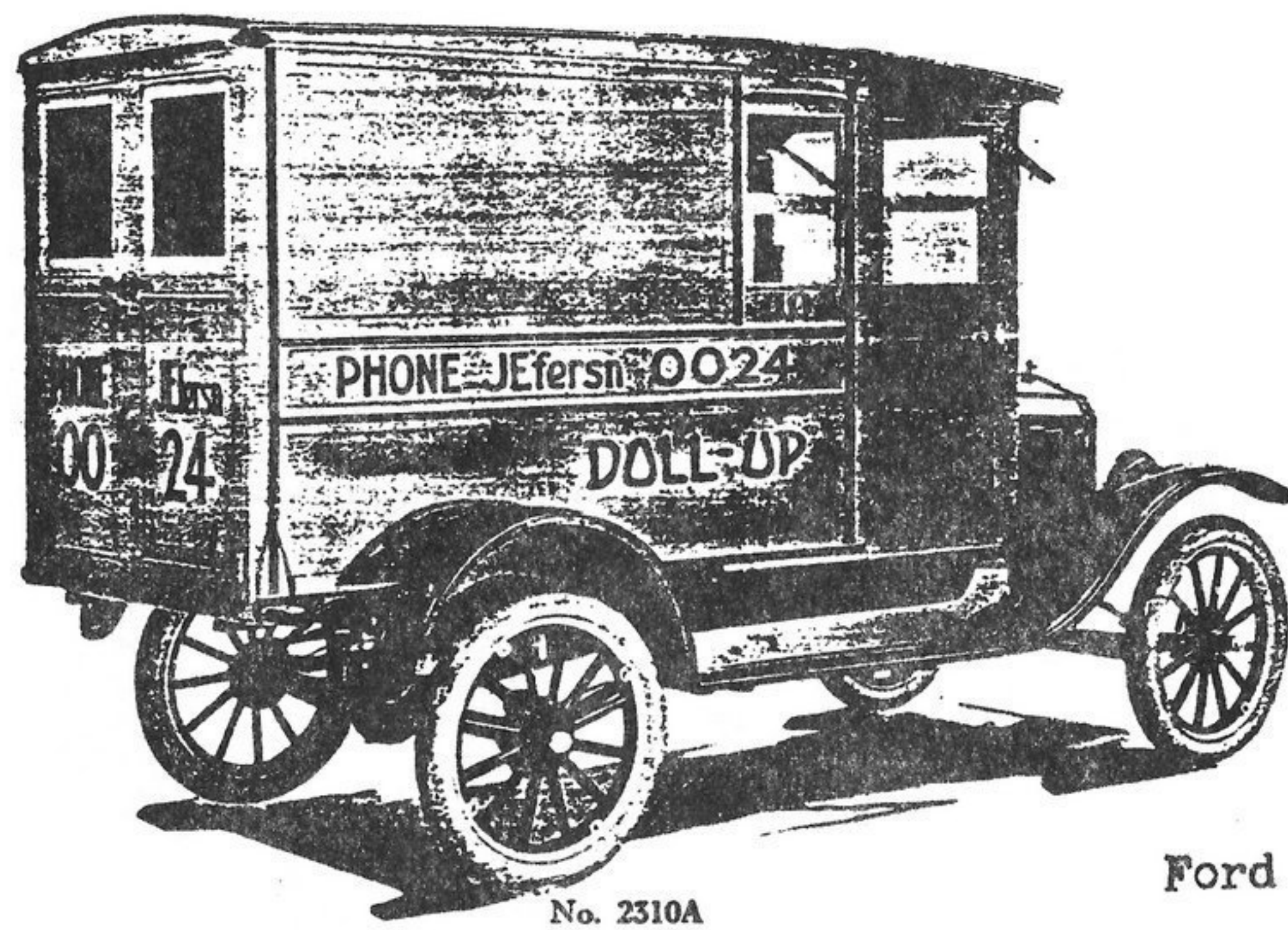
Buffalo Pitts products are curtained and decked with best quality black or tan oiled and enameled water-proof duck.

Buffalo Pitts products are fully guaranteed to be free from defects in material and workmanship, and any part proving defective within one year from date of purchase will be replaced free of charge if defective part or parts are returned to our factory, transportation charges prepaid. We will not be responsible for any alterations or repairs upon our products outside of our own factory.

"The mid-1920s saw the last manufacturing by Buffalo Pitts.

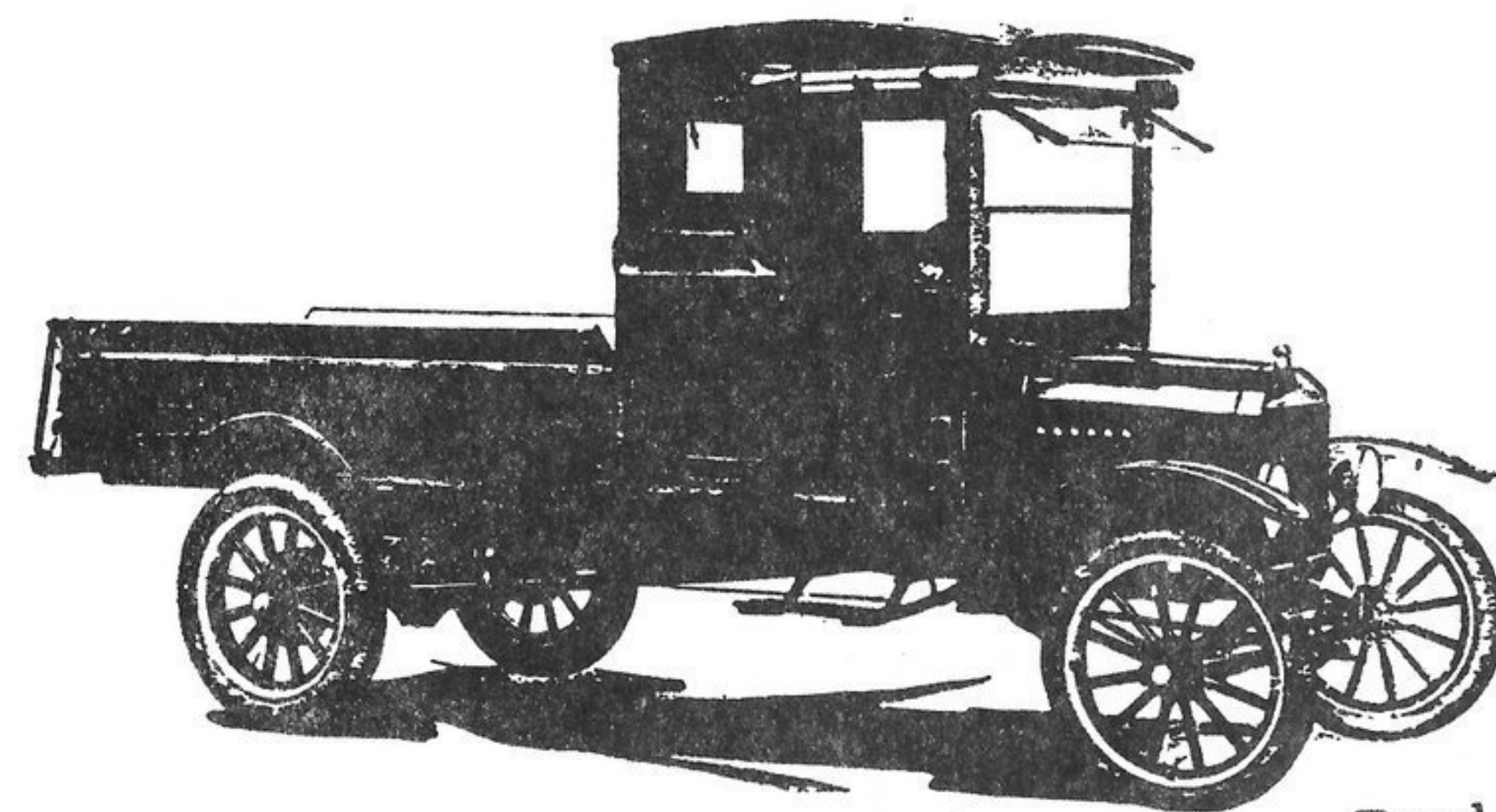
By 1930 Buffalo Pitts was out of the manufacturing business and was renting its properties.

By 1935 rental income did not cover city and county taxes. Foreclosure sales resulted. Successful bidders formed Pitts Realty, which was liquidated at the end of World War II".



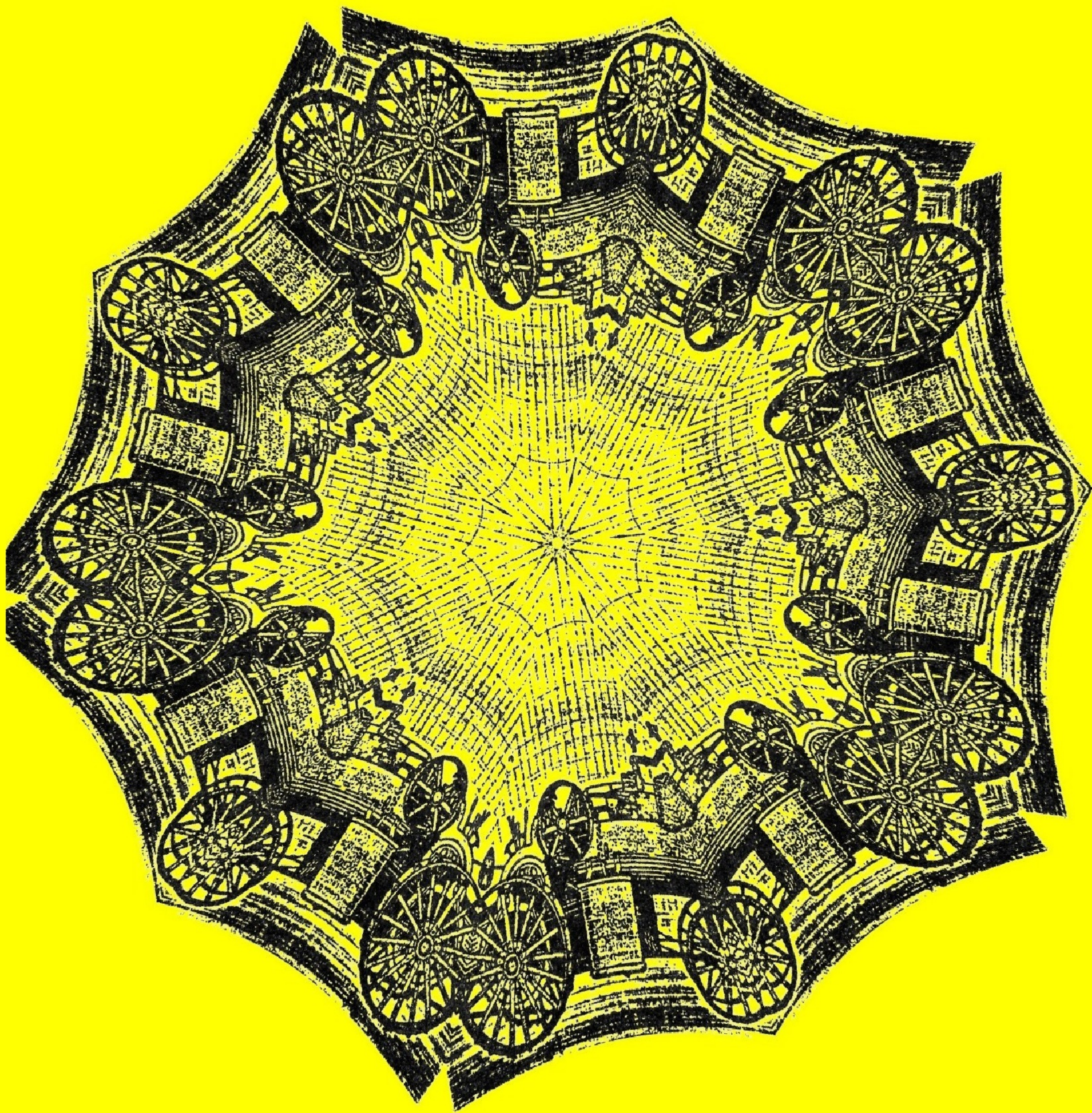
No. 2310A

Ford



No. 237

Ford



ABOUT THIS BOOK

This book has been slightly reformatted for the benefit of: readability, optical character recognition (OCR) performance (of content situated at 90°), and ease of use. Some of the original pages had content in both portrait and landscape orientation. For those pages the page has been copied so that the portrait-oriented content is on a page with -P, and the landscape content is on a page with -L. For example, the original page 8 is now pages 08-P and 08-L.

The books published by the late Dr. Herman Sass are typically referred to as scrapbook style. That is, the contents are black and white, and are of poor quality (e.g., low resolution, distorted, etc.).

Please note that when Dr. Sass created this book (as Head Librarian at the Research Library of the Buffalo & Erie County Historical Society) he had access to documentation that few others had. Today, better copies of the catalog pages and ads contained in this book may be available online. For example, documentation from Buffalo Pitts can be found on websites such as VintageMachinery.org.

Posted: March 2021

Edited by: Brian D. Szafranski, Elma NY USA

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